

Converting and Exporting Data in XML Format



Applies to:

SAP BW 3.5, SAP BI 7.0 etc. For more information, visit the [EDW homepage](#).

Summary

This paper briefs about Information broadcasting that allows you to make objects with business intelligence content available to a wide spectrum of users. It also offers functions to optimize performance and for exception reporting.

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Author Bio



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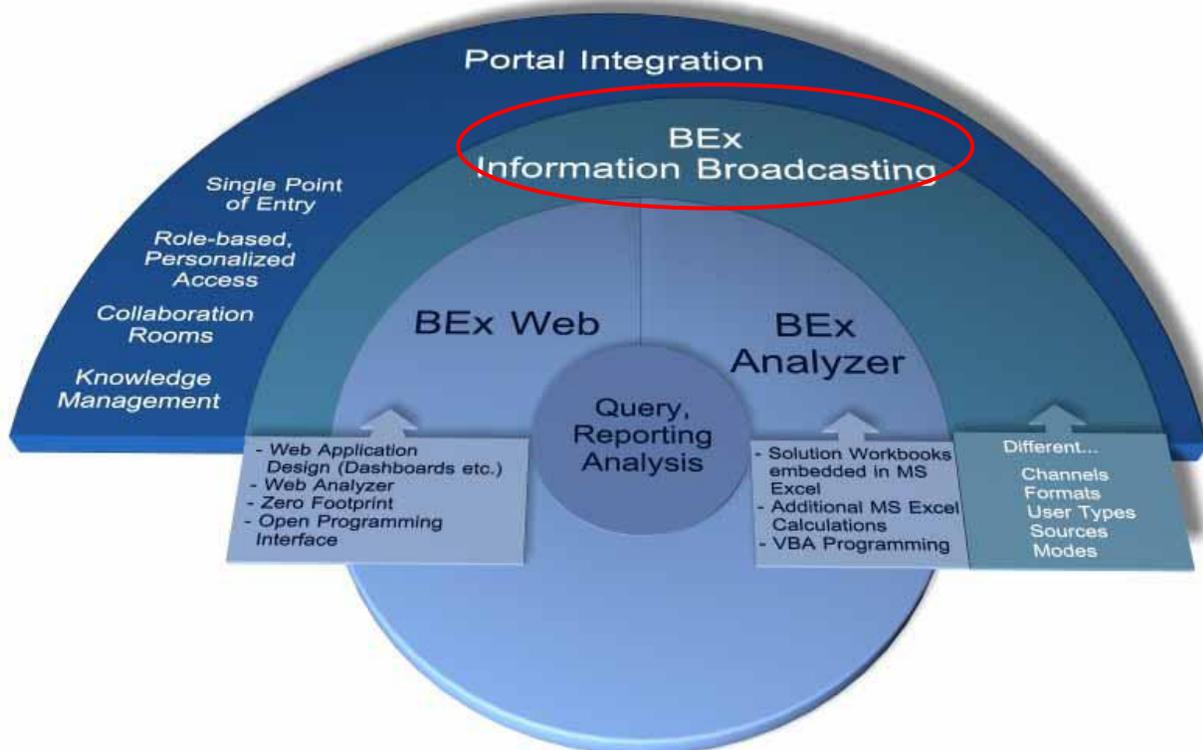
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Information Broadcasting

Information broadcasting allows you to make objects with business intelligence content available to a wide spectrum of users. It also offers functions to optimize performance and for exception reporting.

It is mainly used to automate queries, web templates, and reports in different output formats like PDF, Excel, XML, XHTML, and HTML or as an online link such to different destinations such as:

- End-user emails or group of user mails (E-mail Bursting)
- SAP Enterprise Portal
- SAP Enterprise Portal Knowledge Management folders



From the above diagram we can say that:

Information Broadcasting allows the distribution of BW information

Via

Different channels... i.e., E-Mail and Enterprise Portal

Different formats...i.e., XML, HTML, MHTML, BEx Analyzer Workbooks and ZIP Files

Different sources ...i.e., BI Web Applications - Dashboards, cockpits, BEx Analyzer Workbooks and Queries

Different modes...i.e., Online & pre-calculated

Why Is Broadcasting Important?

- Reduces the time users spend looking for information
- Improves the likelihood that users will use your BI data
- Expands the reach of BI data to non-SAP users as well!
- Makes BW data available for users on the go

- Lets you link your BW and Portal systems together!
- Lets users collaborate, integrate BW content with other enterprise and Web content, etc.!

Features:

- **Distribution with BEx Broadcaster**

With the BEx Broadcaster, we can pre-calculate queries, query views, Web templates, reports and workbooks and broadcast them by e-mail or to the portal. In addition to the pre-calculated documents in various formats (XML, HTML, MHTML, ZIP and so on) that contain historical data and we can also generate online links.

- **Access in the SAP NetWeaver Portal**

In the portal, the ideal way of accessing Business Intelligence information is through a central entry page (for example BEx Portfolio). This shows the content of the Knowledge Management folder where you published the content. The *Broadcasting* layout profile displays the content that is especially tailored to the needs of users who work with Business Intelligence content in the portal.

- **BEx Broadcaster**

Using the BEx Broadcaster we can pre-calculate and distribute Web templates, queries, query views, reports and workbooks. We can broadcast BI objects either as pre-calculated documents or online links (this is not possible for workbooks). Your distribution options include broadcasting by e-mail or broadcasting to the portal. Furthermore, you can print these BI objects in the required format.

- **BEx Broadcaster and Broadcasting Wizard**

In the BEx Broadcaster, we can create new broadcast settings with both the broadcaster itself and with a wizard. The broadcasting wizard is an assistant that supports in creating a new setting by providing step-by-step instructions. Since the settings options are limited with the wizard in comparison to the broadcaster, we have the option of jumping from the wizard to the broadcaster to make further settings as necessary.

- **Precalculation and Distribution of Queries, Query Views, Web Templates and Reports**

We can precalculate queries, query views, Web templates, and reports in various formats or create online links for these BI objects. We can broadcast the information by e-mail, to the portal, or to a printer.

For precalculation and distribution, we can choose

- 1) Queries
- 2) Query Views
- 3) Web Templates
- 4) Reports

- **Output Formats**

a. XML (MS Excel)

The system generates an XML file that contains the results and displays them in a data table.

- This output format supports object types Query and Query View only.
- The XML file cannot be edited in the BEx Analyzer.

b. MHTML

The system generates an MHTML file. All components of the HTML page (HTML, style sheet, pictures, and so on) are in one file. We can use this output format when you want to generate one individual document and broadcast it by e-mail or to the portal. Recipients cannot navigate in the generated file.

- This output format does not support object type Report.

c. HTML

The components of the HTML page are generated by the system in individual files. We can use this output format to generate multiple documents with various filter settings from the same BI object. Recipients can navigate between different filter views for the BI object (Query, Query View, Report, or Web Template).

- This output format does not support object type Report.

d. Online Link to Current Data

The system generates a URL to the current navigational state of the BI object (Query, Query View, Web Template, or Report). The recipients can call the BI object and navigate further within it.

e. PDF

The system generates a static PDF file.

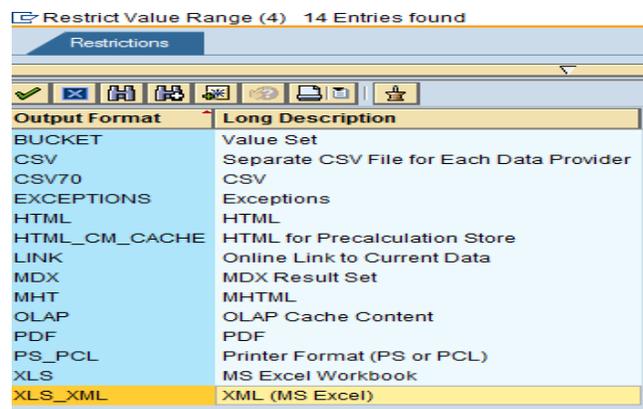
f. Print Format (PS or PCL)

The document is generated in the suitable format for the output device: PostScript (PS) or Printer Control Language (PCL).

The BEx Broadcaster allows you to select from the output formats available for the distribution type you selected.

The Print Format (PS or PCL) output format is printer-specific and is therefore only available with distribution type Broadcast to Printer. The Portable Document Format (PDF) output format is also available for this distribution type.

Output formats are based on the distribution type you select. Below screen shot shows the output formats for BEx Broadcaster., out of which XML is one.



• **Distribution Options:**

Using the BEx Broadcaster we can distribute the reporting objects either in pre-calculated form or as an online link. Your distribution options include

- Sending by e-mail
- Exporting into the Enterprise Portal
- Sending by E-Mail

Sending by e-mail is an option for distributing BW objects. We can send the reports in BW to the Email address specified of the recipients.

We can send the file in the different formats mentioned above.

Exporting into the Enterprise Portal

Export into the Enterprise Portal is one option for distributing BW data file. You can put the this data file in a collaboration room or in a KM folder.

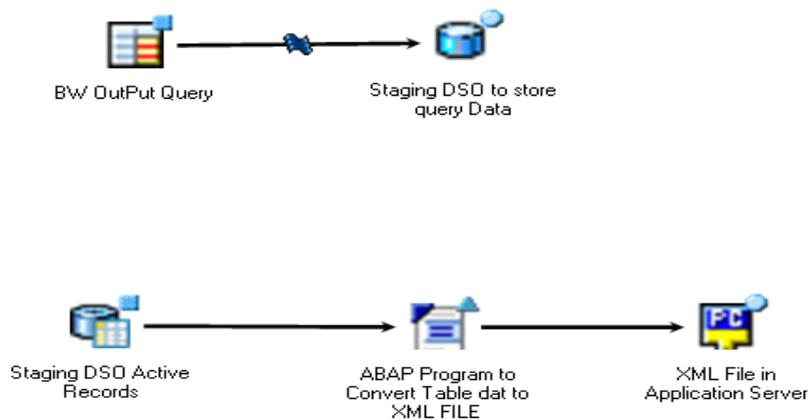
From the Enterprise Portal we can download the file in the different formats mentioned above.

From KM folder we need to write Java program to put this file in required folder for accessing by other system.

Using ABAP through APD (Analysis Process Design)

In this approach, we use Bex Query result as input and extract this query data into direct DSO. After that, this DSO active table data used as source and convert this table data into XML file using ABAP program and save this file in application server of BW system.

See the below picture to extract query data into XML file.



ABAP Program For Conversion:

```

DATA : t009 LIKE TABLE OF t009 WITH HEADER LINE.
DATA : BEGIN OF itab OCCURS 0,
a(100) TYPE c,
END OF itab.

DATA: xml_out TYPE string ,
      path type rlgrap-filename value 'D:\usr\sap\put\file_p.xml'.

DATA : BEGIN OF up1 OCCURS 0,
f(255) TYPE c,
END OF up1.
DATA: xmlup1 TYPE string .

*----- Fetch Data

SELECT * FROM t009 INTO TABLE t009.

*----- Convert data to XML Format
CALL TRANSFORMATION ('ID')
SOURCE tab = t009[]
  
```

```

RESULT XML xml_out.

CALL FUNCTION 'SCMS_STRING_TO_FTEXT'
EXPORTING
TEXT = xml_out
* IMPORTING
* LENGTH =
TABLES
FTEXT_TAB = itab.

* Exporting to Presentation server

CALL FUNCTION 'GUI_DOWNLOAD'
EXPORTING
filetype = 'BIN'
filename = 'c:\a.xml'
TABLES
data_tab = itab.
* Exporting to Application server

open dataset path for output in binary mode.
loop at itAB .
transfer ITAB to path.
endloop.
close dataset path.

```

In the above program code, the data from table is exported to Application and Presentation server.

Output file from Presentation server:



Screen shot showing output from File a.xml:

```

<?xml version="1.0" encoding="utf-16" ?>
- <asx:abap xmlns:asx="http://www.sap.com/abapxm
- <asx:values>
  - <TAB>
    - <T009>
      <MANDT>100</MANDT>
      <PERIV>01</PERIV>
      <XKALE>X</XKALE>
      <XJABH />

```

Conclusion: From the above two options APD is the optimal solution to build XML file in terms of configuration and cost as through broadcaster we need Enterprise Portal configuration and programming effort in JAVA.

Use of PI

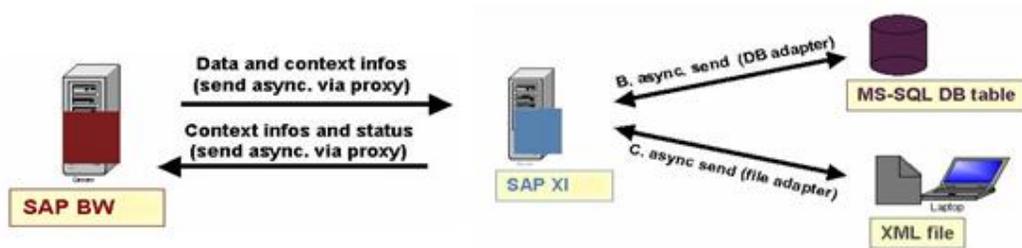
PI provides a technical infrastructure for XML-based message exchange to enable the integration of SAP and non-SAP systems. Generating TVA reports in XML format can be achieved with the use of PI.

PI would be used for:

- Converting BI information into XML report
- Validating data against XML schema using validation techniques

Additionally, PI would also allow making periodic changes to XML schema, if any are required.

- As shown in the below diagram, SAP BI will send the data to SAP PI; PI will convert it to XML



Development of ABAP Proxy in BI:

The scenario development begins in PI with the definition of interface objects for inbound and outbound communication with the BI system. These generic definitions will be used to generate ABAP proxies in BI. The objects will establish the link between the two systems.

Once the technical infrastructure has been established for the interface between BI and PI, the proxies are bound to the process chain infrastructure by creating a custom process type. In other words, ABAP code is implemented which reads datasets from the database table

In order to deliver the dataset to PI, the methods of the generated proxy are called, utilizing the configuration that defines the interface between the systems. The source code that performs the read and delivery is wrapped inside a custom process type, thus inheriting the general properties of the process chains framework (such as active monitoring of its status and writing a log).

The following interfaces need to be set up:

1. BI outbound interface:

- Create and implement ABAP-proxies for BI-PI communication
- Preparations for custom process type – class definition and implementation
- Create Open Hub/InfoSpoke
- Create custom process type and process chain

2. Interface in PI:

- Define interface objects for BI-PI communication.

Related Content

For more information, visit the [EDW homepage](#).

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