DSM/BRFplus Troubleshooting Tools

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FDT_HELPERS is a transaction for DSM/BRFplus data analysis and maintenance. It has list of Transactions/Reports (tools) to analyze and maintain BRFplus objects such as Objects References, Transportation, XML Export/Imports, Code Generation, Rule Execution, etc. We also have the same kind of tools in Workbench level also. But some of those are simple and only gives you information related to single object. Using the FDT_HELPERS you can do mass objects operations and also has additional options. Usually we have to use these tools for mass objects operations and should be careful while running some of these Report/Transactions, it may effect for entire specified criteria. For example, if we specified Software component for a FDT_DELETE report then it may delete all the Applications and related objects under that software components.

ACCESSIBILITY
The FDT HELPERS tools are available from NetWeaver 702 SP08 and 730 SP03, this transaction may be available in previous versions but it will not be fully functional. The functionality can be attained by implementing the SAP Note 1576546 - BRF+. Beautification of Tool Reports.

Reports/Transactions are categorized by the usage.

BRFPLUS – GENERAL
This category of reports will display object references, usages, sub objects and overview objects across different BRFplus objects.

BRFplus: Cross-Reference Analysis - FDT_SHOW_OBJ_RELATION_TREE (Report)
It shows all the relationships of a particular BRFplus object to other objects, used as well as using objects.
## DSM/BRFplus Troubleshooting Tools

### BRFplus: Cross-Reference Analysis

<table>
<thead>
<tr>
<th>Object</th>
<th>Application 'YDF_Helpset'</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relation</td>
<td>Where Used</td>
</tr>
<tr>
<td>System ID</td>
<td>CT2</td>
</tr>
<tr>
<td>Timestamp</td>
<td>10:13:02.053,152,232000</td>
</tr>
<tr>
<td>DB Client</td>
<td>ECC</td>
</tr>
<tr>
<td>T-ABAP Mode</td>
<td>761308</td>
</tr>
<tr>
<td>Deep</td>
<td>True</td>
</tr>
<tr>
<td>Cross Application</td>
<td>True</td>
</tr>
<tr>
<td>Working Version</td>
<td>True</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reference</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>CUST</td>
<td>116</td>
</tr>
<tr>
<td>Number of objects</td>
<td>40</td>
</tr>
</tbody>
</table>

For each application or object, you can perform drill downs and display technical details.

- **Show Object**: Will open a BRFplus workbench with this object
- **Object Database Entries**: Will show the database tables that stores information about this object.
- **Object Usage Tree**: Will show the used objects tree.
- **Referenced object tree**: Will display referenced objects.
- **Generated Class (Wizard Icon)**: Will show the code generated class for a BRFplus function.

### BRFplus: Content Overview - FDT_CONTENT_OVERVIEW (Report)

It shows the number of applications and objects grouped by the different software layers and application component. For each application or object, you can perform drill downs and display technical details.

For example, if you wanted to see all the customized BRFplus applications in the system. By selecting Customizing Objects you can see all the customized applications in the system. It gives you search across the whole system and you can search based on different criteria’s like Transport and Delete options. So the search result will be categorized by Software Components -> Application Components -> Applications.

Here BBPCRM is a software component; if you double click on it then it will show you list application components under this Software component.

And click on one of the application component CRM-MD-TM to see the applications under that component. So it will show, list of applications under this category.
Application Overview – FDT_APPLICATION_OVERVIEW (Report)

This report will display all objects for a given application. You may filter the output with respect to the transport status as well as deletion status of the objects.

This report does a similar job compared to the Application Usage Overview tool available in the BRFplus workbench. However, it offers some additional features.

BRFplus: Cross-System Content Comparison - FDT_CONTENT_COMPARISON (Report)

This report will compare the BRFplus objects of different systems.

Example: To compare development system and quality system applications, then you can use this report. It gives you comparison result for each and every object. First screen displays you the identical one, i.e. Common and Total number of objects in both systems. If all the objects are same in both systems, then the background will be in Green color otherwise red color background.
You can click on any application to see the differences like versioning, inactive, Obsolete and marked for deletion.

The second screen displays the more details about the applications. If there are any differences then it'll show you each and every difference count based on the category (versioning, only Existing, Inactive, Obsolete and marked for deletion). You can double click on each category to see the actual differenced objects.

**BRFPLUS - OBJECT MAINTENANCE**

This category has a Transaction (FDT_WORKBENCH) and Report (FDT_WD_START_CATALOG_BROWSER) to call the BRFplus workbench and Catalog browser.
DSM/BRFplus Troubleshooting Tools

BRFPLUS - QUERY

This category of reports will display BRFplus objects referenced by ABAP Dictionary object and vice versa. These reports do a similar job compared to the Dictionary Usages Overview tool available in the BRFplus workbench. However, it offers some additional features.

BRFplus: Data Objects bound to an ABAP Dictionary Type – FDT_DDIC_WHERE_USED (Report)

This report will display BRFplus objects referenced by ABAP Dictionary object.

Here we can see the list of BRFplus objects referenced by BAPIRET2_T table type.

BRFPLUS - TRANSPORT

This category of reports is used for detecting transport request object consistencies and inactive objects. You can activate and delete inactive objects in the transport request, write individual objects or whole application into other requests as well. Also identification can be carried out for transport requests where transport execution has failed.
These reports do a similar job compared to the Transport Analysis tool available in the BRFplus workbench. However, it offers some additional features.

**BRFplus: Mass Check of Objects in Transport Requests - FDT_TRANS_MASS_CHECK (Report)**

Check several objects (on a transport) for consistency & Summarize IDs for a certain error message type / Activate inactive IDs / Write IDs with obsolete write to transport timestamp to the transport again.

It will detect the export problems. You can activate and write those objects by selecting check boxes, try to activate and write to transport again in the selection criteria.

**BRFplus: Manual Restart of the Import Queue - FDT_TRANS_Q_RESTART (Report)**

Manually restart the transport import queue for transports with errors during after import processing. The data of the import queue can be monitored via view FDT_TRANS_Q_0002.

**BRFplus: Transport Phase Execution - FDT_TRANS_PHASE_EXECUTION (Report)**

Identifies transport requests where transport execution has failed. For such transports, you can carry out the following activities to release manually the objects to be transported
- Execute before export processing
- Execute after Import processing

It will detect the errors of transport executions.
Execute After import process. It will delete those inactive objects versions and activates objects with previous version.

**BRFplus: Write Application or ID to Transport - FDT_TRANS (Report)**

Lets you add a BRFplus object (S-table or C-table object) to a particular transport request. You can specify a single object or an entire BRFplus application to be transported.

Using this report you can write single object or entire application into specified request. In some situation you wanted to transport some of the objects in an application, then you can use this tool to write those objects into a separate transport request and transport it into other system or clients.

As we have an option to write individual objects into a transport request using the Transport button in the workbench toolbar. Here you can write list of objects at a time or entire application.

**BRFPLUS - XML**

The BRFplus XML export and import functionality lets you transfer one or more BRFplus objects from one system to another, assuming that both systems support BRFplus. Only the current active version of the BRFplus objects can be exported. An XML file is generated for the exported objects. From this file, the objects can be imported to the target system.

**Need for XML Export and Import**

Although BRFplus provides transport functionality, the need for XML export and import arises in the following scenarios:
- BRFplus content needs to be transferred to other SAP systems that are not connected to the SAP transport system.
- BRFplus content needs to be published to non-SAP systems.
- BRFplus content needs to be corrected with the use of an SAP note.

Export BRFplus Objects to XML File - FDT_XML_EXPORT (Report)

It exports one or more BRFplus objects specified by their IDs to an XML file that can be imported into another system. This report does a similar job compared to the XML Export tool available in the BRFplus workbench. However, it offers some additional features for selecting the objects to be included in the export. We don’t have an option to export individual objects of different applications in workbench level. Using this report you can export those. But make sure, when you are transporting individual objects without an application object in it then the target system should have the corresponding objects application already created otherwise XML inconsistent error will raise.

You can export any BRFplus objects and their subordinate objects or entire application as XML file for a transport request or specified object IDs. You can export any XML version that supports that system. You can also export internal format or external format.

Import BRFplus Objects from XML File - FDT_XML_IMPORT (Report)

You can import exported BRFplus XML file into target system. This report does a similar job compared to the XML Import tool available in the BRFplus workbench.

If the importing XML version is lower than the target system version then system will automatically upgrades it. But if your target system is not supporting the upgrading parsing functionality then maybe you have to find a SAP Note for that or need to raise OSS Message.

For more information on XML Export and Import, Please check the below link http://scn.sap.com/docs/DOC-4562

BRFPLUS – DATABASE

This category of reports checks database table consistency and log will be displayed for inconsistency tables. It also displays list of database tables that stores information about BRFplus object.
BRFplus: DB Check - Where-Used Table - FDT_CHECK_DB_WHERE_USED (Report)

Check the DB data consistency of FDT_ADMN_0901, the Where Used Table.

BRFplus: DB Check - General Data Consistency - FDT_CHECK_DB_CONSISTENCY (Report)

Checks the data consistency of all entries in the specified tables that are referenced by any of the other BRFplus tables. In case of errors, a summary report is presented where the observed inconsistencies are shown in aggregated form, broken down by the affected tables.

BRFplus: Show Object Database Entries - FDT_OBJECT_DB_ENTRIES (Report)

For an object specified by its ID (or a list of such objects), this report returns a list of all BRFplus database tables where the given object occurs. From each listed occurrence, you can drill down interactively into the database for further information.

It displays list of database tables that stores information about specified object ID.

BRFPLUS – DELETION

Using this category of Reports you can clean up database tables that are deleted already in BRFplus workbench level, you can mark objects for deletion, you can also delete old versions, Delete unused objects and corrupted BRFplus expression types.

While running these reports we should be carefully, because it may delete the total applications from the systems. These reports do the same job of Delete button options in Workbench.

BRFplus: Mark Objects for Deletion – FDT_MARK_FOR_DELETE (Report)

With this report, you can flag BRFplus objects as being marked for deletion. Objects in that state remain visible as well as functional, but they can neither be changed nor newly be assigned to any other objects. The marked objects are subject to logical as well as physical deletion as soon as the respective report is run.

The scope for objects to be marked for deletion is based on application level. This means that when you run the report, entire applications are marked for deletion, including all objects that belong to the selected applications. However, you can also choose to set the flag for all objects in a software component or application component (or even a list of such components).

The report offers two modes of operation: Normally, you can use this report to mark all objects contained in the selected applications for deletion. However, if you realize that objects have been marked by accident, or
if you find many of such marked objects in an application where they shouldn't been marked for deletion. You can use the same report to revert all deletion marks for all objects in an application and also can control the report behavior with the Revert Mark for Deletion checkbox.

**BRFplus: Logical and Physical Deletion Run - FDT_DELETE (Report)**

With this report, you can carry out a mass deletion run for unused rule objects of all kinds that have been created with BRFplus. The report offers numerous options that help you fine-tune the scope of affected objects. These options go far beyond the settings that can make in the application administration tool, that is offered in the web-based BRFplus workbench and include among others, the possibility of performing a system-wide, cross-application deletion run.

**Prerequisites**

- For logical deletion:
  
  The BRFplus applications defined in the selection scope contain objects that are marked for deletion (unless you explicitly choose to delete all objects regardless of them being marked for deletion or not).

- For physical deletion:

  The BRFplus applications defined in the selection scope contain objects that are logically deleted.

- During run execution, none of the objects within the selection scope are locked. Otherwise, report execution stops with an error message.

**Features**

The report offers two modes of operation:

- Delete logically: In this mode, the report collects all objects within the scope of selection that have been marked for deletion and deletes them logically. This means that after the run, the deleted objects still exist physically in the system but are completely hidden for the user and cannot be used anymore.

- Delete physically: In this mode, the report collects all objects within the scope of selection that have been logically deleted and deletes them physically. After that, there is no way of undeleting the objects (unless you have saved them in a system backup that could be restored).

Depending on the selected objects, the report determines which type of transport request is needed for recording the changes. If no suitable request has been entered, the report stops and let you enter the required transport. After that, execution continues.

**BRFplus: Discard Old Versions - FDT_TRUNCATE_VERSIONING (Report)**

It helps to clean up the BRFplus database by removing old object versions that are no longer needed. While it is always welcome to free disk space and speed up processing, running this report means that the version history is cut off and incomplete. So, need to be careful using this report and make sure first that the older versions can be discarded without violating organizational or legal obligations.

**BRFplus: Delete Unused Unnamed Expressions and Data Objects - FDT_APPLICATION_CLEANUP (Report)**

It deletes unused expressions and data objects from the database. As like Application Administration tool in the Workbench.

**BRFplus: Delete Corrupted Expression types - FDT_DELETE_EXTY (Report)**

It deletes corrupted expressions. For example you created an expression type that and its not been created properly then you can delete such kind of expression type here.
BRFPLUS – GENERATION

This category of reports is used to generate classes for the BRFplus functions. So this will improve the performance of rule execution as it is directly running ABAP code.

Analyze Generated Functions / Regenerate - FDT_GENERATION_TOOL (Report)

Checks for which BRFplus functions generated classes exist.

You can start the regeneration if necessary. By double-clicking the class name in the result list, you can navigate to the Class Builder transaction for the generated class.

With this program you can analyze the generated classes for BRFplus functions.

Please note that the purpose of this is a program is, to allow developers of generation functionality of expression types to check the generated classes. It is not expected to be used by business users and might not be as comfortable as a business user might expect.

Mass Generation of BRFplus Functions - FDT_GENERATE_MANY_FUNCTIONS (Report)

Let’s you trigger the system-wide generation of ABAP classes and source code for all BRFplus functions in the system, or a subset of these.

Although classes and source code are automatically generated on demand, this report can be very helpful in situations where you have imported a high number of BRFplus objects into a new target system. Here, time-consuming on-demand generation could cause considerable work interruptions shortly after the import. You can avoid this by triggering the generation of all the necessary classes in advance with this report.

**Purpose**

With this report, you can generate ABAP code for all functions in the system that has been created with BRFplus. There are different ways of limiting the number of functions to be generated.

For BRFplus functions, code is normally generated automatically whenever a function is executed and the system determines that the function or any of its dependent objects has been changed since last code generation. Under normal conditions, this report is therefore not necessarily needed. However, you can, for example, use the report in the following scenarios:

- You have transported BRFplus functions into another system and want to ensure that generated code is available for all functions right from the start.
- You want to find out if there are any functions in the system where code generation fails, as a starting point for further analysis.
- You need to have an overview of how many of the functions have generated code available or not.

**Prerequisites**

- None of the objects belonging to a function is locked.
- For lean trace code generation, all objects belonging to a function (and the function itself) are versioned.

Lean Trace Readiness Check - FDT_LEAN_TRACE_READY_CHECK (Report)

Drills down through the hierarchy of all objects assigned to the specified function and determines whether there are any objects for which versioning has not been switched on. If any such object is found, the function is considered not to be ready for tracing because tracing of a function is only possible if all involved objects are under version control.

You can choose this report, to makes a function ready for lean trace if need. If the objects involved are divided into more than one transport requests, the report has to be run once per request. This situation can occur in cross-application usage scenarios.
BRFPLUS - RULE EXECUTION

This category of report will be used for function execution in different ways. Usually we are running with current data provide for function. But we can enable trace for a function and it will log all the run time context. The traced context can then be used to re-run the function evaluation at a later point in time.

BRFplus: Define Trace Settings for a BRFplus Function - FDT_TRACED_CONTEXT_SETTING (Report)

With this report, you can specify a function to be traced. You can define the user and the time frame for which the context of a rule evaluation shall be traced. The traced context can then be used to re-run the function evaluation at a later point in time.

BRFplus: Rerun Functions with Traced Context - FDT_TRACED_CONTEXT_RE_EXECUTE (Report)

With this report, can re-run BRFplus functions with the context data that was traced during an earlier function evaluation.

BRFplus: Generate Template Coding to Call Function Processing - FDT_TEMPLATE_FUNCTION_PROCESS (Report)

It generates an ABAP code snippet for the specified BRFplus function that you can use, to call that function from your application.

We don’t need to write API code to call the BRFplus function from the backend. Using this tool you can generate the code and use there. It's a similar tool that we have in Workbench.

BRFPLUS - CHECK TOOLS

This category of reports used for other checks like DDIC binding refreshing and Decision table inconsistency.

BRFplus: Check or update DDIC binding for data objects - FDT_DDIC_BINDING_UP_TO_DATE (Report)

It checks for the specified BRFplus application, software component, or package whether the dictionary bindings of the BRFplus data objects in the selected scope are ok. You can run the report for elements, structures, tables, or any combination of these types of data objects.
**BRFplus: Analyze Decision Table for missing and/or overlapping cond.**

FDT_ANALYZE_DECISION_TABLE (Report)

Analyze Decision Table for missing and/or overlapping conditions.
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