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Configuration Guide for Configuring the ABAP Back-end for ABAP Development Tools

ABAP Development Tools for SAP NetWeaver Version
2.31

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1 Configuration Guide for Configuring the ABAP Back-end for ABAP Development Tools

Scope of Documentation

This documentation describes how you need to configure an ABAP back-end system in order to enable ABAP Development Tools for SAP NetWeaver (ADT).

Target Audience

ABAP system administrators who configure the ABAP server for each back end system in order to connect them with ADT.

Validity of Documentation

This documentation belongs to the ABAP Development Tools **client version 2.31** and refers to the range of functions that have been shipped as part of the standard delivery for **SAP NetWeaver Release 7.40 SP02 - SP08** and **SAP NetWeaver Release 7.31 SP04 - SP13**.

1.1 Preparation

The preparation prior to the installation of front-end components includes all steps that you must perform in order to work smoothly with ABAP Development Tools on the ABAP back-end system. It includes the completion of the subsequent activities for each back-end system you want to work with.

1.1.1 Establishing Secure Network Communication

Prerequisites

For security reasons, however, you must ensure that the **Secure Network Communication (SNC)** is implemented for the corresponding system and enabled for the selected system connection.

Context

In ABAP Development Tools, developers always work with ABAP projects to access repository objects from back-end systems. An ABAP project represents a real system connection on the front-end client and, therefore, it requires an authorized user to access the back-end system. With the standard authentication method, the user enters his or her user ID and password at the front-end client to log on to the back-end system.

To enable SNC for an ABAP system ...

Procedure

1. Add the relevant ABAP system to the **SAP Logon Pad** – if not already done.
2. In the SAP Logon Pad, open the **Properties** page for the ABAP system.
3. Enable the **Secure Network Communication** for the selected system – if not already done.


1.1.1.1 RECOMMENDATION

Context

For the sake of convenience, and again for security reasons, use also the single sign-on (SSO) option for system authentication (if it is available in your SAP NetWeaver system landscape). Compared with SNC, SSO meets the security requirements for working with ABAP projects even more. Using SSO, the user does not need to enter a user ID and password, but can access the specific system directly after the system has checked the validity of the logon ticket.

To enable SSO for an ABAP system...

Procedure

1. Install the SAP NetWeaver **Single Sign-On 1.0 SP03 or higher** (either "Secure LoginClient" or "Enterprise Single Sign-On") for the corresponding platform (either for 32- or 64-Bit).
2. Configure the Secure Network Communication between ABAP Development Tools client and the ABAP back-end system. For more information, see <http://scn.sap.com/community/netweaver-ss> 

1.1.2 Providing Roles and User Authorizations

The assignment of authorizations to back-end system users is based on roles that are predefined in the ABAP system. As system administrator, you will assign to such back-end system users one or multiple roles that, in turn, are based – at a technical level – on authorization objects.

When you are assigning user authorizations in an ABAP system for access to repository objects from within an ABAP project, we strongly recommend using the standard roles (see Table below) and authorization default values that are provided for working with ABAP Development Tools.

Procedure

Use one of the standard SAP roles below as a master copy to assign users of the ABAP Development Tools in your organization.

See also: [#unique_6](#)

1.1.3 Standard Roles and Authorization Objects

The table below shows the standard roles. One of them should be assigned to the users of ABAP Development Tools depending on the needed authorizations:

Table 1: List of predefined standard roles

Role	Description
SAP_BC_DWB_ABAPDEVELOPER	Role that contains all authorizations relevant for ABAP developers
SAP_BC_DWB_WBDISPLAY	Role that contains all authorizations to display and browse ABAP development objects. i Note The users are not allowed to modify ABAP development objects.

These standard roles are linked with the following authorization objects that are additionally required for the usage of ABAP Development Tools:

- S_ADT_RES: Resource access by ABAP Development Tools
- S_RFC: Authorization check for RFC access
- S_TCODE: Transaction codes check at transaction start

1.1.3.1 URI Prefixes for the Authorization Object S_ADT_RES

ABAP Development Tools uses the following URI prefixes for the authorization object **S_ADT_RES**:

- /sap/bc/adt/abapsource/*
- /sap/bc/adt/abapunit/*
- /sap/bc/adt/acm/dcl/*
- /sap/bc/adt/activation
- /sap/bc/adt/activation/*
- /sap/bc/adt/atc/*
- /sap/bc/adt/checkruns
- /sap/bc/adt/checkruns/*
- /sap/bc/adt/compatibility/*
- /sap/bc/adt/core/discovery
- /sap/bc/adt/datapreview/*
- /sap/bc/adt/datapreview/ddic*
- /sap/bc/adt/ddic/*
- /sap/bc/adt/debugger
- /sap/bc/adt/debugger/*
- /sap/bc/adt/discovery
- /sap/bc/adt/docu/*
- /sap/bc/adt/documentation/*
- /sap/bc/adt/error/*
- /sap/bc/adt/feeds
- /sap/bc/adt/feeds/*
- /sap/bc/adt/filestore/ui5-bsp/*
- /sap/bc/adt/fpm/*
- /sap/bc/adt/functions/*
- /sap/bc/adt/includes/*
- /sap/bc/adt/logs/*
- /sap/bc/adt/messageclass
- /sap/bc/adt/messageclass/*
- /sap/bc/adt/navigation/*
- /sap/bc/adt/nhi/*
- /sap/bc/adt/oo/*
- /sap/bc/adt/packages
- /sap/bc/adt/packages/*
- /sap/bc/adt/programs
- /sap/bc/adt/programs/*
- /sap/bc/adt/quickfixes/*
- /sap/bc/adt/refactorings
- /sap/bc/adt/refactorings/*
- /sap/bc/adt/repository/*
- /sap/bc/adt/runtime/dumps
- /sap/bc/adt/runtime/dumps/*

- /sap/bc/adt/runtime/systemmessages
- /sap/bc/adt/runtime/systemmessages/*
- /sap/bc/adt/runtime/traces
- /sap/bc/adt/runtime/traces/*
- /sap/bc/adt/security/*
- /sap/bc/adt/sscr/*
- /sap/bc/adt/system/clients
- /sap/bc/adt/system/users
- /sap/bc/adt/wdy
- /sap/bc/adt/wdy/*
- /sap/bc/cts/*
- /sap/bc/esproxy
- /sap/bc/esproxy/*

i Note

The wildcard "*" is used for the subpaths of the URI.

1.1.3.2 Remote Access to Function Modules (Specified in the Authorization Object S_RFC)

ABAP Development Tools requires remote access to the following function modules that are specified for the authorization object **S_RFC**:

Table 2: List of function modules, specified for the authorization object S_RFC

Activity [ACTVT]	Name of RFC object to that can be accessed [RFC_NAME]	Type of RFC object that can be accessed [RFC_TYPE]
16 (Execute)	DDIF_FIEL-DINFO_GET	FUNC (Function module)
	RFCPING	
	RFC_GET_FUNC-TION_INTERFACE	
	SADT_REST_RFC-ENDPOINT	
	SUSR_USER_CHANGE_PASS-WORD_RFC	
	SYSTEM_RE-SET_RFC_SERVER	

1.1.3.3 Transaction Code Check at Transaction Start (Specified in the Authorization Object S_ TCODE)

ABAP Development Tools has to start certain transactions in order to enable the SAP GUI integration in Eclipse. Therefore, the tools require access to the following transaction codes that are specified in the authorization object **S_ TCODE**:

- SADT_START_TCODE
- SADT_START_WB_URI

1.1.4 Activating ICF Services in Development Systems

In an ABAP system, Internet Communication Framework (ICF) services are inactive by default. In order to enable the full functionality in ABAP Development Tools in a development system, the set of the below listed ICF services need to be activated.

1.1.4.1 General

Context

ICF services can be accessed and activated through the Maintain Services page. In general, you have to open the Maintain Services page in order to activate the corresponding service:

Procedure

1. Call the transaction **SICF** in the relevant back-end system.
2. Select **DEFAULT_HOST** as a filter for the Virtual Host entry.
3. Select **F8** or use the corresponding toolbar icon to display the services tree.

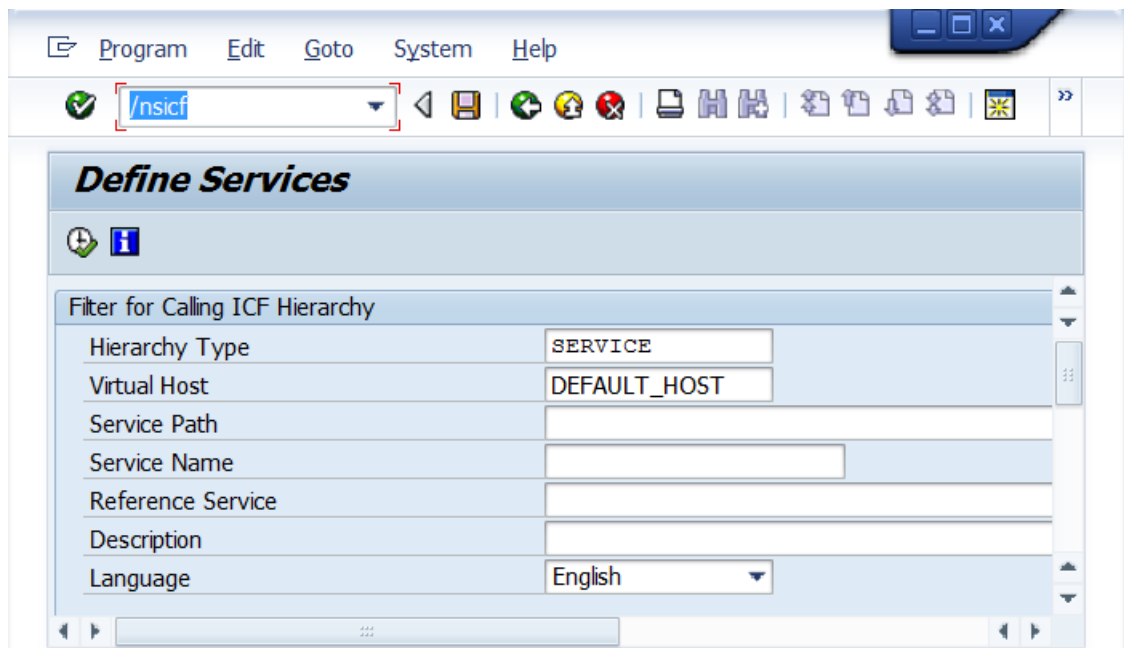


Figure 1: Entry page of the SICF transaction

Results

The Maintain Service page is opened. From here, you navigate to the corresponding service that you want to activate.

1.1.4.2 ABAP Language Help and ABAP Problem Help

Context

To activate the ICF services **docu** (ABAP Language Help) and **toolsdocu** (ABAP Problem Help), use the substeps as follows:

Procedure

1. Expand the node **default_host > sap > bc > abap**.
The subtree displays the ICF service items **docu** and **toolsdocu**.
2. Select the ICF service **docu** and choose **Activate Service** from the context menu.

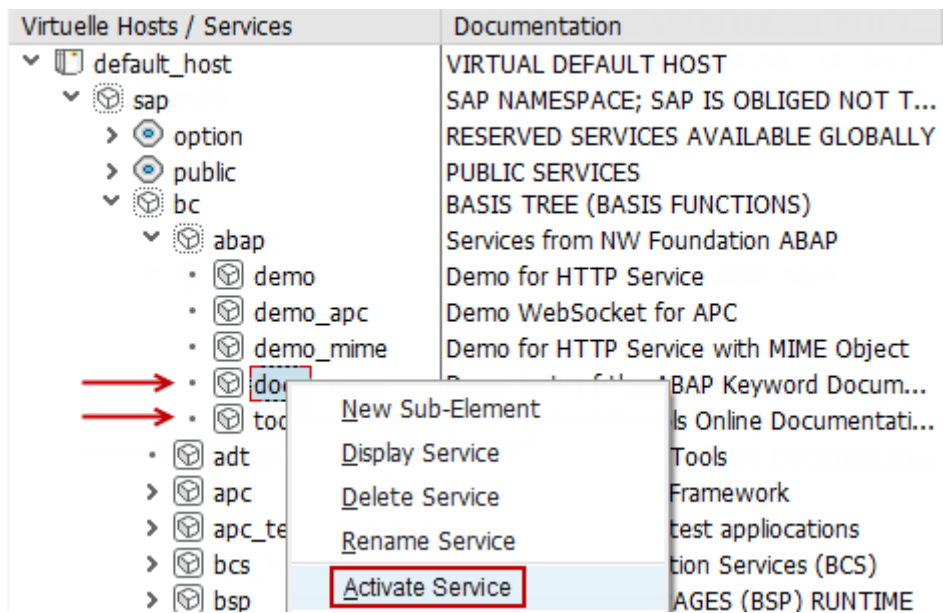


Figure 2: Activating docu service

3. Repeat the last step for the ICF service **toolsdocu**.
4. In addition, expand the link node in the public subtree **default_host > sap > public > bc > abap**.
5. Select the link node **docu** and choose **Activate Link** from the context menu.
6. Repeat the last step for the link item **toolsdocu**.
7. To test the link to the ICF service, choose **Test Link** from the context menu.

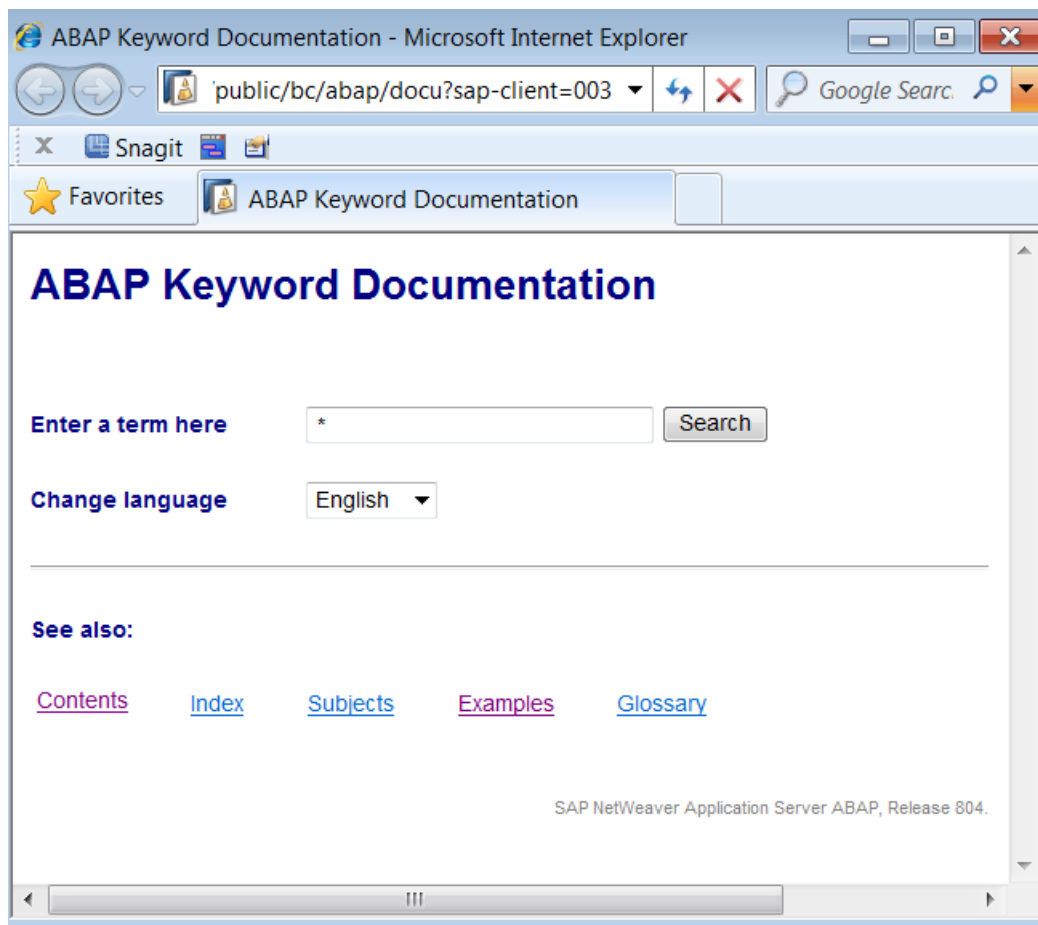


Figure 3: Default page that is displayed after successful service call

8. Repeat steps 1 - 8 for the service references `/default_host/sap/public/bc/abap/docu` and `/default_host/sap/public/bc/abap/toolsdocu`

1.1.4.3 Sharing HTTP Links

Context

To activate the ICF service `adt` that enables ABAP developers to share http links, use the substeps as follows:

Procedure

1. Expand the node `default_host > sap > bc`.
2. Select the **adt** ICF service.

3. Choose **Activate Link** from the context menu.

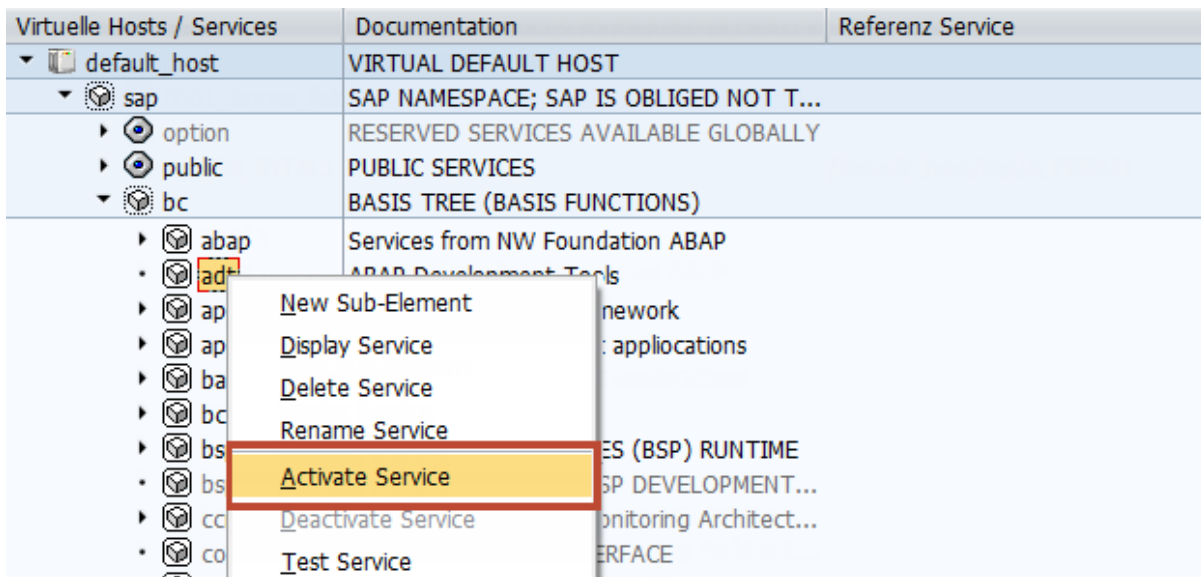


Figure 4: Activating demo service

1.1.4.4 Web Dynpro ABAP Development

Context

If you plan to use the Web Dynpro ABAP Development tool, then to access the Layout page of the Web Dynpro View Controller Editor you have to activate the preview service. The Web Dynpro View Controller Editor provides a preview of the user interface at design time only if the preview service is active.

In the ABAP system, the HTTP and preview services appear disabled by default. Therefore, as system administrator you have to activate them for each system in question.

i Note

For further information see also SAP Note 1088717 - Active services for Web Dynpro ABAP in transaction SICF.

If you want to activate the preview service, use the substeps below:

Procedure

1. Expand the node **default_host > sap > bc > webdynpro > sap**.
The subtree displays the service item **wdy_aie_vd_preview**.

2. Select the service **wdy_aie_vd_preview**.
3. From the context menu, choose **Activate Service**>.

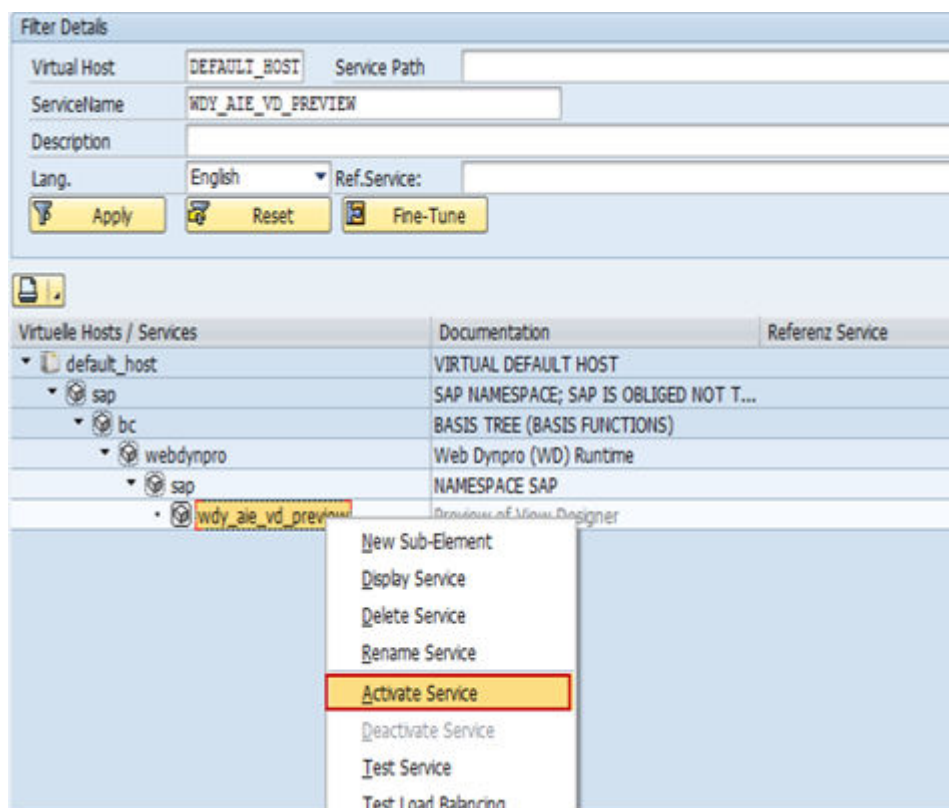


Figure 5: Activating wdy_aie_vd_preview service

1.1.5 Configuring Profile Parameters

In addition to logon tickets, ABAP systems can also issue the more restricted assertion tickets when accessing system services. This might be important in order to meet maximum security requirements when you are using the integrated SAP GUI in ABAP Development Tools.

Instead of asking for the password, the back-end system checks the validity of the assertion ticket to allow the user access to system services.

Procedure

Use the following settings to configure your ABAP system in such a way that it issues the assertion tickets only (without logon).

Profile Parameters

Table 3: List of profile parameters

Parameter	Value	Description
login/create_sso2_ticket	3	The parameter with this value causes the ABAP system to issue assertion tickets only (no logon tickets).
login/accept_sso2_ticket	1	The parameter with this value configures the ABAP system to accept assertion tickets.

1.1.6 [Optional-] Enabling SAP HANA-based ABAP Source Search

Prerequisites

- After activating the business function an index is created that requires minimum 10 GB free space on your server. Therefore, ensure that the required space is provided before you activate the corresponding business function.
- The ABAP Source Search is available in SAP NetWeaver 7.40 SP 5 and higher.

Context

In order to enable the ABAP Source Search, your ABAP system must be connected with a SAP HANA database. In addition, you have to activate the `SRIS_SOURCE_SEARCH` business function in each ABAP system. For this, use the transaction code `SFW5` in the backend. Note that the authorization object `S_SWITCH` with the activity `07` is required.

Procedure

1. In the backend of your ABAP system, open the Switch Framework Customizing with the transaction code `SFW5`.
2. In the `ENTERPRISE_BUSINESS_FUNCTIONS` tree, select the `SRIS_SOURCE_SEARCH` business function and select checkbox in the Planned Status column.

Name	Description	Planned Status
ENTERPRISE_EXTENSIONS	Enterprise Extensions	
ENTERPRISE_BUSINESS_FUNCTIONS	Enterprise Business Functions	
BC_SRV_STW_01		
BC_SRV_STW_02		
BC_SRV_STW_03		
DAAG_DATA_AGING		
DA_ARCHOBJ_STANDARD_1		
DA_COCKPIT_ILM		
ERP_CA_INT_ADD_VERSN		
FDT_TEST_ENTERPRISE_BF_OFF		
FDT_TEST_ENTERPRISE_BF_ON		
ILM		
SPW_TEST_BF		
SRIS_SOURCE_SEARCH	ABAP Source Search (Reversible)	<input checked="" type="checkbox"/>
ZMY_FIRST_BF_IN_SYSTEM		

Figure 6: Activated SRIS_SOURCE_SEARCH business function

3. In the tool bar, choose the **Activate Changes** button.

Results

The creation and activation of the index is started. Note that the activation of the business function is finished within a few seconds or several hours.

Note

You can run the `SRIS_CODE_SEARCH_PREPARATION` report in order to check the status of the index creation. It also checks another index on the `TADIR` table which is usually updated regularly with the where-used index. If this `TADIR` index is incomplete, you can schedule an index rebuild also with this report.

If the report is not available, please wait at least 2 hours before executing the ABAP Source Search the first time.

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