

PUBLIC

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Installing ABAP Development Tools for Eclipse



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1 About This Installation Guide

Scope of Documentation

This documentation describes how to install the Eclipse-based front-end components of ABAP development tools for Eclipse (in short: ADT) on a local drive.

Target Audience

- ABAP system administrators and developers who want to install, build, or provide the installation packages from ABAP development tools for Eclipse for ABAP developers who work with an Eclipse-based IDE.
- ABAP system administrators who configure the ABAP server for each back-end system in order to connect them with ABAP development tools for Eclipse.

Context

ABAP development tools for Eclipse provides features that are client-specific or require a specific back-end version. To highlight and contrast back-end-specific help content in the relevant context, the following SAP icon fonts are used:

lcon	Deployment Model	Description
Home Home	On-premise/Private Cloud	Used for SAP NetWeaver, SAP S/4HANA and for SAP S/4HANA Cloud, private edition
△ Cloud	Public Cloud	Used for SAP BTP ABAP environment and SAP S/4HANA Cloud

Validity of Documentation

This documentation belongs to ABAP development tools for Eclipse with the client version **3.40** and refers to the range of functions that have been shipped as part of the standard delivery for:

- **(b)** Home On-premise/Private Cloud shipments:
 - SAP NetWeaver 7.3 EHP1 SP04 and higher
 - SAP NetWeaver 7.4 SP02 and higher
 - SAP NetWeaver 7.5 SP00 and higher
 - SAP NetWeaver AS for ABAP 7.51 innovation package SP00 and higher
 - SAP S/4HANA 1709 FPS00 and higher

- SAP S/4HANA 1809 FPS00 and higher
- SAP S/4HANA 1909 FPS00 and higher
- SAP S/4HANA 2020 FPS00 and higher
- SAP S/4HANA 2021 FPS00 and higher
- SAP S/4HANA 2022 FPS00 and higher
- SAP S/4HANA 2023 FPS00 and higher
- SAP S/4HANA Cloud, private edition

(i) Note

SAP S/4HANA Cloud, private edition is supported as of SAP S/4HANA 1709 FPS00 and higher.

- *Cloud* Public Cloud shipments:
 - Cloud SAP BTP ABAP environment
 - Cloud SAP S/4HANA Cloud

Home Prerequisite

To enable development using ABAP development tools for Eclipse in releases \geq SAP NetWeaver 7.3 EHP1 SP04 and \geq SAP products based on ABAP platform 1909 (Application Server ABAP 7.54) the ABAP system administrator needs to configure each back-end first.

For more information, see the back-end configuration guide Configuring the ABAP Back-end for ABAP Development Tools for Eclipse

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Eclipse Platform:	Eclipse Public License v 1.0
 2024-03 (4.31) 2023-12 (4.30) 2023-09 (4.29) 	
Eclipse Semantic File System (SFS) (SAP), 0.7.0.sap	Eclipse Public License v 1.0
Handy-URI-Templates, 1.1.7	Apache License 2.0
Iz4 Compression algorithm, 1.8.1.2	BSD Two Clause "Simplified" License
spring-security-jwt, 1.1.1	Apache License 2.0
List of additional features required for running ABAP Feature Name	Development Tools Feature ID
EMF Edit Data Binding	org.eclipse.emf.databinding.edit.feature.group
EMF Model Query	org.eclipse.emf.query.feature.group
EMF Model Transaction Workbench Integration	org.eclipse.emf.workspace.feature.group
EMF Validation Framework	org.eclipse.emf.validation.feature.group
Graphiti (Incubation)	org.eclipse.graphiti.feature.feature.group
Web Services Tools	org.eclipse.wst.ws_ui.feature.feature.group
GEF Classic Zest	org.eclipse.zest.feature.group

ABAP Development Tools (ADT) requires manual installation of the above mentioned additional Eclipse features before the ABAP Development Tools package installation due to the following reasons:

- 1. **Customer Requirement:** Many developers at customer and partner organizations do not have internet access or an official SAP Support Portal (S-) User. Thus, SAP decided to provide an installation scenario for a person who usually has an *S* User and internet access: that is, an administrator who is responsible for the development landscape in the customer or partner organization.
- 2. **One Central Reference Installation:** The additional manual steps are only required for one administrator who assembles a complete reference installation. SAP is responsible and will provide support and maintenance for the SAP features in this central reference installation.
- 3. Several Decentralized Customer Installations: The administrator can copy and extend the reference installation with more features and takes over the responsibility for this customer specific installation. The administrator will then provide this customer specific installation to many developers (without s User or internet access). Thus the majority of developers in the SAP customer and partner community will not have to perform the mentioned manual installation steps of some additional Eclipse features.
- 4. **Innovation:** SAP is able to support the current Eclipse release with this product at an earlier point in time than in the past.
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January 2004

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2.4 Documentation in the SAP Help Portal

You can find this documentation at the Product Finder on the SAP Help Portal in the Technology Platform area.

3 Support and Maintenance Strategy

ABAP Development Tools (ADT) include a server and a client part. For both the Support and Maintenance Strategy is different from **SAP NetWeaver 7.3 EHP1**. As SAP GUI the ABAP Development Tools follow the SAP Maintenance Strategy Rule 11: "Downward-compatible software component versions can be replaced by a higher version in the course of the life of the application release they are built into, without adaptations or changes to other software component versions within the release. Therefore downward-compatible software component versions are usually not maintained for the entire mainstream and extended maintenance period of the application release they are built into. Instead they have to be replaced by a higher version."

ABAP Development Tools is a Downward-Compatible Software Component Version. This means that starting with **SAP NetWeaver 7.3 EHP1** the most current client version of the ABAP Development Tools will always be compatible with all future SAP NetWeaver 7.3 EHP1, ABAP platform 1809 (AS ABAP 7.53) and higher, as well as SAP BTP ABAP environment shipments. But this requires the users to regularly update to the current client version of the ABAP Development Tools. Because the client has many dependencies this may require additional updates on the PC which will be listed in the following client section.

O Note

For more information, see https://me.sap.com/notes/ ABAP Development Tools support strategy

△ Cloud SAP GUI is not relevant in the context of SAP BTP ABAP environment.

3.1 General Terms

ABAP Development Tools (ADT) depends on Eclipse and SAP GUI. It will not be shipped as a bundle with Eclipse and SAP GUI but separately as an Eclipse p2 repository. Both Eclipse and SAP GUI are supported for different individual platforms. The support of individual platforms also depends on the support of the operating systems by the manufacturers. SAP cannot provide support for a platform or for an operating system that is no longer supported by its vendor or manufacturer. By the same token, SAP cannot provide support for an Eclipse version or any other Open Source software version that is no longer supported by the Eclipse Foundation or the Open Source community.

(i) Note

Cloud SAP GUI is not relevant in the context of SAP BTP ABAP environment.

3.2 Support Platform Matrix

ABAP development tools for Eclipse is only supported for a subset of the individual platform and operating system versions for which Eclipse and SAP GUI are supported. These are:

Software	Version
Operating System	 Microsoft Windows 10TM or higher Apple macOS 10.15 or higher
Java Runtime	JRE version 17 or 21 (64-Bit, LTS)
	 O Note ADT is validated and tested against Java versions 17 and 21 (Oracle Java and OpenJDK). The latest Eclipse packages are bundled with Eclipse Temurin, an OpenJDK binary distribution provided by the Eclipse Adoptium project. Any other JRE found on the system is not used. If you want to remove the bundled JRE and use a custom one, see SAP note 3035242 .
Microsoft Visual C++ Runtime	Visual Studio 2015-2022 (Visual C++ 14.0)
G Home SAP GUI for Windows	7.60 or higher
	 Note Cloud SAP GUI is not relevant in the context of SAP BTP ABAP environment.

Software	Version
Home SAP GUI for Java (macOS)	7.70 or higher
	 Note Cloud SAP GUI is not relevant in the context of SAP BTP ABAP environment SAP recommends to use the latest version of SAP GUI for Java 7.80 to be compatible with the newer versions of Eclipse Temurin bundled with the standard Eclipse packages as well as the <i>x86_64</i> and <i>AArch64</i> architectures of the macOS operating system. Regarding <i>AArch64/x86_64</i> compatibility, see SAP note 3251738¹. If you want to remove the bundled JRE from Eclipse and use a custom one, see SAP note 3035242¹. In addition, JavaFX is required. For more information, see SAP note 2971147¹.
Browser	Chromium-based Browser / Firefox / Microsoft Edge / Safari
Eclipse Platform	• 2024-03 (4.31)
	2023-12 (4.30)2023-09 (4.29)

3.3 Special Terms for Operating Systems

SAP recommends that you always use a current Support Package for the relevant operating system listed in the ABAP Development Tools. An operating system that is no longer supported by its manufacturer should no longer be used in conjunction with ABAP Development Tools. If an issue occurs only on an unsupported operating system SAP will not analyze nor solve the issue, but instead reply by recommending an operating system upgrade. Additionally SAP does not test ABAP Development Tools on such operating systems anymore.

3.4 Special Terms for Java Runtime Versions

SAP recommends that you always use a current Java runtime version listed in the ABAP Development Tools. A Java runtime version that is no longer supported by the Java runtime version manufacturer should no longer be used in conjunction with ABAP Development Tools. If an issue occurs only on an unsupported Java runtime version SAP will not analyze or solve the issue, but instead reply by recommending a Java runtime version upgrade. Additionally SAP does not test ABAP Development Tools on such Java runtime versions anymore.

3.5 Special Terms for Eclipse Versions

SAP recommends that you always use a current Eclipse version listed in the ABAP Development Tools. An Eclipse version that is no longer supported by the Eclipse foundation should no longer be used in conjunction with ABAP Development Tools. If an issue occurs only on an unsupported Eclipse version SAP will not analyze or solve the issue, but instead reply by recommending an Eclipse version upgrade. Additionally SAP does not test ABAP Development Tools on such Eclipse versions anymore.

3.6 *Home* **Special Terms for SAP GUI Versions**

SAP recommends that you always use a current SAP GUI version listed in the ABAP Development Tools.

A SAP GUI version that is no longer supported by SAP should no longer be used in conjunction with ABAP Development Tools. If an issue occurs only on an unsupported SAP GUI version SAP will not analyze or solve the issue, but instead reply by recommending a SAP GUI version upgrade. Additionally SAP does not test ABAP Development Tools on such SAP GUI versions anymore.

O Note

△ Cloud SAP GUI is not relevant in the context of SAP BTP ABAP environment.

3.7 Special Terms for Microsoft Visual C++ Runtime Versions

A Microsoft Visual C++ runtime version that is no longer supported by Microsoft should no longer be used in conjunction with ABAP Development Tools.

If an issue occurs only on an unsupported Microsoft VC runtime version SAP will not analyze or solve the issue, but instead reply by recommending a Microsoft VC runtime version upgrade.

(i) Note

SAP does not test ABAP Development Tools on such Microsoft VC runtime versions anymore.

→ Recommendation

SAP recommends that you always use a current Microsoft VC runtime version. For more information, see Prerequisites [page 24]

3.8 Special Terms for Browser Versions

SAP recommends that you always use a current browser version listed in the ABAP Development Tools. A browser version that is no longer supported by the browser manufacturer should no longer be used in conjunction with ABAP Development Tools. If an issue occurs only on an unsupported browser version SAP will not analyze or solve the issue, but instead reply by recommending a browser version upgrade. Additionally SAP does not test ABAP Development Tools on such browser versions anymore.

3.9 Language Support

SAP does not explicitly release different language versions of ABAP Development Tools other than English.

3.10 SAP Shipment Channel and License Agreement

The use of ABAP Development Tools (ADT) is subject to the terms and conditions of your license agreement with SAP which is directly related to the SAP shipment channel where ABAP Development Tools has been initially been downloaded and installed from. SAP does not support to update ABAP Development Tools with software from a different SAP shipment channel than the initial installation of ABAP Development Tools has been done.

Example

An update of an older ABAP Development Tools installation which has originally been downloaded and installed from the SAP Support Portal with a newer ABAP Development Tools version which is provided on the SAP Developer Center is not recommended and not supported by SAP.

4 Introduction

ABAP Development Tools (ADT) is the integrated ABAP development environment built on top of the Eclipse platform.

Its main objective is to support developers in today's increasingly complex development environments by offering state-of the art ABAP development tools.

These tools include strong and proven ABAP lifecycle management on the open Eclipse platform with powerful UI (user interface) capabilities.

5 **G** Home **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 and the establishing of the Secure Network Communication (SNC).

5.1 Preparing the ABAP Back-End System

In the context of on-premise scenarios, each back-end system you want to work with ADT, the ABAP system administrator needs to configure the corresponding ABAP systems first.

For this, the Configuration Guide for Configuring the ABAP Back-end for ABAP Development Tools is provided where you can find further information.

5.2 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.

Procedure

To enable SNC for an ABAP system, proceed as follows:

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.

5.2.1 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.

Procedure

To enable SSO for an ABAP system, proceed as follows:

- 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 (64-Bit).
- 2. Configure the Secure Network Communication (SNC) between ABAP Development Tools and the ABAP back-end system.

For more information, see SAP Single Sign-On Community

6 Installation

The subsequent installation procedure comprises all front-end components (SAP and Eclipse IDE packages) that are required to run ABAP Development Tools (ADT) on your local drive.

6.1 Installing ABAP Development Tools

6.1.1 Prerequisites

Operating System

The following operating system (OS) is installed on your local PC:

- Microsoft WindowsTM 10 or higher
- Apple macOS 10.15 or higher

Java Runtime Environment (JRE)

One of the following JRE versions is installed:

JRE version 17 or 21 (64-Bit, LTS)

O Note

- ADT is validated and tested against Java versions 17 and 21 (Oracle Java and OpenJDK).
- The latest Eclipse packages are bundled with Eclipse Temurin, an OpenJDK binary distribution provided by the Eclipse Adoptium project. Any other JRE found on the system is not used. If you want to remove the bundled JRE and use a custom one, see SAP note 3035242

Eclipse

You have already installed a suitable Eclipse IDE package based on one of the following releases:

- 2024-03 (4.31)
- 2023-12 (4.30)
- 2023-09 (4.29)

(i) Note

Technically any Eclipse IDE package with feature org.eclipse.platform of the corresponding release is installed, as a minimum, on your local drive.

SAP Software and SAP Support Portal Access

O Note

If this is not the case, install the SAP GUI¹⁾ first from the SAP Software Download Center on the SAP Support Portal.

You will need this SAP GUI¹⁾ for integration of GUI-based tools in the IDE for ABAP development.

CloudSAP GUI is not relevant in the context of SAP BTP ABAP environment.

• You have an s User that enables to download the ABAP Development Tools package from the SAP Support Portal.

Required Eclipse Features

To benefit from all ADT features, you need to install the following additional Eclipse features in accordance to the relevant installation:

Feature Name	Feature ID	SAP HANA Stu- dio	Eclipse IDE for Java Developers
EMF Edit Data Binding	org.eclipse.emf.databinding.edi t.feature.group	-	Х
EMF Model Query	org.eclipse.emf.query.feature.g roup	Х	Х
EMF Model Transaction Workbench Integration	org.eclipse.emf.workspace.featu re.group	-	Х
EMF Validation Framework	org.eclipse.emf.validation.feat ure.group	-	Х
Graphiti (Incubation)	org.eclipse.graphiti.feature.fe ature.group	-	Х
Web Services Tools	org.eclipse.wst.ws_ui.feature.f eature.group	Х	Х
GEF Classic Zest	org.eclipse.zest.feature.group	-	Х

③ Note

If required Eclipse features are **not** displayed, it might be that they are already installed.

- To display all available features, deselect the Hide items that are already installed checkbox.
- To check what is already installed, choose the *What is already installed*? link beside the checkbox from above.

Internet Browser

On your local drive, one of the following browsers is installed:

- Chromium-based Browser
- Firefox
- Microsoft Edge
- Safari

Microsoft Components for Windows[™]

Microsoft Visual C++ Redistributable Packages for Visual Studio 2015-2022 (64 bit) is installed on your local drive.

(i) Note

- You need this component for communication with the back-end system.
- You need to install the runtime component separately from the Microsoft installation page.
- If you start ADT before you have installed the DLLs, an error dialog might be opened stating that the ABAP communication layer is configured incorrectly. In this case, you need to restart Eclipse once with the "-clean" option. Afterwards, remove the "-clean" option again. For further information, see here The Eclipse runtime options

6.1.2 Context

The ABAP Development Tools package is available for download in the SAP Software Download Center is on the SAP Support Portal.

6.1.2.1 Use Cases

The subsequent installation of SAP components requires that you already have a suitable Eclipse IDE package in operation on your computer.

Depending on your use cases, you might need different Eclipse IDE packages:

- **ABAP development only**: For this use case, you only need the minimum Eclipse IDE package for example, the Platform Runtime Binary from the Eclipse download page.
- **Side-by-side Java and ABAP development**: For this use case, you usually already have an Eclipse IDE running. Here you can add the ABAP Development Tools features.
- **ABAP development on SAP HANA**: For this use case, you have already installed the latest SAP HANA Studio version on your local drive.

O Note

This use case is not relevant in the context of SAP BTP ABAP environment.

6.1.3 Installation Steps

Procedure

- 1. Downloading the ABAP Development Tools package from the SAP Support Portal
 - a. Launch the SAP Software Download Center so on the SAP Support Portal.
 - b. In the Search Term input field, enter ABAP in Eclipse for the name of the ADT package.
 - c. In the Search Results view, choose the package with the highest version.
 - d. Add the package to the download basket.
 - e. Download the archive zip file to the local directory of your choice.
- 2. Installing additional Eclipse features that are required for running ABAP Development Tools:
 - a. Launch the Eclipse IDE or SAP HANA Studio (see Prerequisites [page 24] above) that is installed on your local drive.
 - b. Choose the menu Help Install New Software... to start the installation wizard.
 - c. In the *Work with* field of the wizard, choose the update site which fits to the Eclipse release of the downloaded Eclipse IDE package.
 - d. For convenient selection, deselect the Group items by category checkbox on the wizard page.

C Install		-		
Available Software				
Check the items that you wish to install.				
Vork with: Latest Eclipse Simultaneous Release - https://downloa	ad.eclipse.org/releases/latest V	ld	Manage.	
Graphit		×	Select Al	
Name	Version	^	Deselect A	
🔲 🚯 Graphiti (Incubation)	0.18.0.202106091000			
Graphiti (Incubation) Developer Resources	0.18.0.202106091000			
🗌 🚯 Graphiti Examples (Incubation)	0.18.0.202106091000			
Graphiti Examples (Incubation) Developer Resources	0.18.0.202106091000			
🔲 🏇 Graphiti Export (Incubation)	0.18.0.202106091000			
🔲 🚯 Graphiti Export (Incubation) Developer Resources	0.18.0.202106091000			
Graphiti SDK (Incubation)	0.18.0.202106091000			
Graphiti SDK (Incubation) Developer Resources	0.18.0.202106091000	, ×		
Details				
Show only the latest versions of available software	Hide items that are already installed What is already installed?			
Show only software applicable to target environment				
Contact all update sites during install to find required software				

Manual installation of a required feature provided by the latest Eclipse update site

e. Install the relevant Eclipse features – depending whether you are going to install ABAP Development Tools on top of SAP HANA Studio or not.

(i) Note

For more information about the required Eclipse features, see Prerequisites [page 24]

Ensure that the filter box is empty.

If you cannot find a required Eclipse feature, it might be already installed. To check this, deselect the *Hide items that are already installed* checkbox.

- f. When you have finished marking your selections, ensure first the filter box is empty and then choose *Next*.
- g. On the next wizard page, review the list of features to be installed and choose Next.
- h. After you have accepted the terms of license agreement, initiate the installation of the selected features with *Finish*.
- i. To apply the changes, restart the Eclipse IDE using the corresponding button in the information dialog that appears.

- 3. Installing the ABAP Development Tools package:
 - a. Launch the installation wizard again through the menu Help Install New Software...
 - b. In the *Work with* field of the wizard, now specify the target directory where you downloaded the package using ABAP Development Tools.

→Tip				
To add the new installation directory, click the Add Archive button to specify the location and enter a name for your local software site. As highlighted in the screenshot below make sure the location path starts with "jar:file:/" and ends with "!/".				
🖨 Add Si	te		×	
<u>N</u> ame:	ADT Installation		L <u>o</u> cal	
Location:	jar:file:/C:/ <adt installation="" package="">!/</adt>		<u>A</u> rchive	
?	Ag	<u>d</u> d	Cancel	
	A software site that is located in the local file directo	ory is specifie	ed by: jar:file:/ <driv< th=""><th>re:>/</th></driv<>	re:>/

<directory_with_zipped_content>!/

- c. For convenient selection, check the Group items by category field on the Wizard page.
- d. Select the relevant ABAP Development Tools item(s) and choose Next.

Note

The *ABAP Core Development Tools* are the mandatory installation whereas installation of other tools is optional. Select optional tools based on your requirements.

In the context of SAP BTP ABAP environment, only the ABAP Core Development Tools is required.



ype filter text		Select All
Name	Version	Deselect A
✓ ■ IIII ABAP Development Tools		
🖂 🖗 ABAP Connectivity and Integration Development Tools	1.99.1	
🗹 🖗 ABAP Core Development Tools	3.0.4	
🗹 🖗 ABAP Development Tools for SAP HANA	2.106.1	
🖂 🖗 ABAP Development Tools for Web Dynpro	1.99.1	
🗌 🖗 BOPF Business Object Tools	1.83.1	
🗹 🖗 CDS Diagrams	1.83.0	
Details		
	or that are already	installed
Show only the latest versions of available software	is that are already	installed
Show only the latest versions of available software	ns that are already ready installed?	installed
Show only the latest versions of available software	-	installed
Show only the latest versions of available software Group items by category What is <u>alr</u>	-	installed
Show only the <u>l</u> atest versions of available software <u>H</u> ide item <u>Group items by category</u> What is <u>alr</u> Show only software applicable to target environment	-	installed
Show only the <u>l</u> atest versions of available software <u>H</u> ide item <u>Group items by category</u> What is <u>alr</u> Show only software applicable to target environment	-	installed

?	< <u>B</u> ack	<u>N</u> ext >	<u>F</u> inish	Cancel

The target directory where you extracted the zip file in step 1 d) serves as the local software site for installation of ABAP Development Tools.

e. On the next page, review the feature groups to be installed and choose Next again.

🖶 Install	
Install Details	
Review the items to be installed.	
Name	Id
ABAP Connectivity And Integration Development Tools	com.sap.adt.pi.tlf.feature.group
ABAP Core Development Tools	com.sap.adt.core.feature.group
ABAP Communication Framework	com.sap.adt.fwk.ci.feature.group
ABAP Development Tools Connectivity	com.sap.adt.connectivity.feature.group
ABAP Development Tools Foundation	com.sap.adt.tools.feature.group
ABAP Development Tools Notifications UI	com.sap.adt.notifications.feature.feature.group
ABAP Transport Management	com.sap.adt.tm.feature.feature.group
🖗 SAP Support Tools	com.sap.ide.support.feature.feature.group
ABAP Development Tools for SAP HANA	com.sap.adt.tools.hana.feature.group
🖗 Web Dynpro ABAP Tools	com.sap.adt.wda.core.feature.group

List of SAP feature groups to be installed

(i) Note

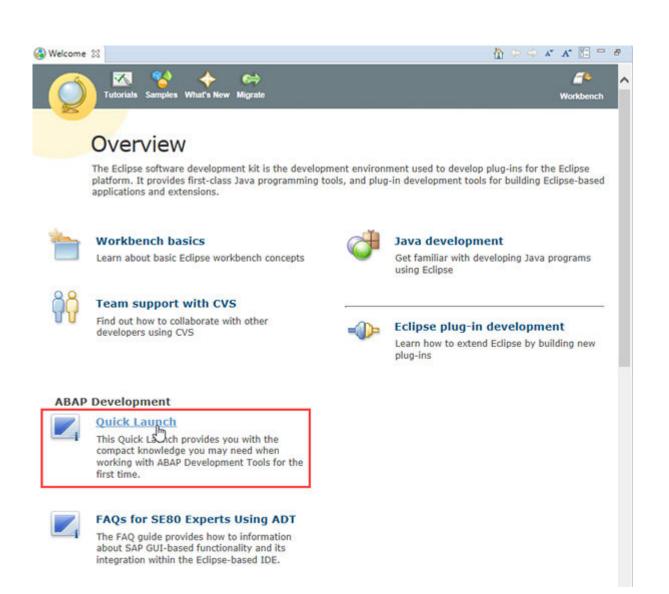
In case one or more of the required Eclipse features are missing, the *Install Remediation Page* is displayed with a warning that the installation cannot be completed. In this case, check and ensure that you have installed all required Eclipse features.

- f. After you have accepted the terms of the license agreement, initiate the installation of selected SAP feature groups with *Finish*.
- g. To apply the changes of the installation procedure, restart the Eclipse IDE.

6.1.4 Result

The successful installation procedure provides you with a ready-to-use ADT installation inside an Eclipse IDE package. It contributes the *ABAP* perspective to the Eclipse IDE.

The *Welcome* page (*Help Welcome*) provides central access to knowledge material and provides links to related **ABAP Development User Guide** topics.



The Quick Launch on the Overview tab provides you with compact knowledge that you may need when working with ADT for the first time.

6.2 Updating ABAP Development Tools

Context

If you want to update an existing version of ABAP Development Tools, open the SAP Software Download Center so on the SAP Support Portal. Here you will always find the most current version as an archive file.

O Note

If you want to add new functionality like "ABAP Enterprise Services and Integration Development Tools" or "ABAP Development Tools for Web Dynpro", you have to install these features by processing the installation steps from chapter Installing ABAP Development Tools [page 24].

Procedure

1. Download the new version of the ABAP Development Tools package from the SAP Support Portal to a location of your choice.

→ Tip

In case of the downloaded archive has the same name as the former archive, you can add the major and minor version to the name of the downloaded archive. So that you do not need to replace the former archive. This enables you to revert the update if it is required.

- 2. Configure the new archive as an update site.
 - a. In the menu bar, select Windows Preferences .
 - b. In the Preferences window, select the Install/Update Available Software Sites 3
 - c. To add the new archive, select the Add... Archive... button to specify the location and enter a name for your local software site.

🖨 Add Site			×
<u>N</u> ame:	ADT Installation		L <u>o</u> cal
<u>L</u> ocation:	jar:file:/C:/ <adt installation="" package="">!/</adt>		<u>A</u> rchive
?		A <u>d</u> d	Cancel

A software site that is located in the local file directory is specified by: jar:file:/<drive:>/ <directory_with_zipped_content>!/

3. Trigger the update by selecting the menu entry Help Check for Updates

6.3 Recommendations for the System Administrator

The Installation Steps [page 27] above describe how to install all front-end components that are required to run ABAP Development Tools (ADT) on a local machine.

In addition, SAP system administrators or IT experts can build their own Eclipse IDE package, containing ADT. This package can be distributed to the ABAP developers using a standard distribution process.

Example

If ABAP developers in your company, have no permission to install ADT on their local machines, this option enables you to build Eclipse IDE packages containing ADT which can be distributed using the distribution process of your company.

To create the Eclipse IDE package for central distribution, you have the following options:

- Manual Building of a Distributable Eclipse IDE Package [page 34]: You want to define the configuration and creation of your Eclipse IDE package step-by-step.
- Automated Building of a Distributable Eclipse IDE Package [page 36]: You want to automate the configuration and creation of your Eclipse IDE package.
- Updating an Already Distributed Eclipse IDE Package [page 43]: You want to update an Eclipse IDE package which has already been distributed within your company.

6.3.1 Manual Building of a Distributable Eclipse IDE Package

You want to build an Eclipse IDE package, that is based on an existing Eclipse IDE package and contains ABAP Development Tools features, step-by-step. This package can then be centrally distributed within your company.

Prerequisites

Download and extract an Eclipse IDE package (for example, Eclipse IDE for Java Developers) or install an SAP HANA Studio. Herein, install the ADT features as described above [page 27].

The Eclipse IDE that has been previously installed needs to be closed.

O Note

To avoid unexpected behavior of the Eclipse IDE, do not work in folders that require specific write authorizations on your local machine. Such a folder would be, for example, *Program Files* on Microsoft WindowsTM.

Context

You want to manually prepare an Eclipse IDE package step-by-step for central distribution within your company.

→ Recommendation

SAP recommends to use manual building before you start using the automated option [page 36].

Procedure

- 1. Navigate to the directory where you have extracted the Eclipse IDE package and have installed the ADT features.
- 2. Configure the default values for various preferences as follows:

- a. Open the eclipse.ini file with a text editor.
- b. After the --launcher.appendVmargs statement, ...

③ Note

To ensure that user-specific configuration data is **not** overwritten with the next update, define the configuration area and the location of the instance area (workspace) explicitly.

For more information, see:

- Eclipse Multi-User Installs 📌
- The Eclipse runtime options *P*
- 1. Define the configuration area.

```
{·} Sample Code
-configuration
@user.home\AppData\Local\ADT\configuration
```

2. Define the instance area.

```
{-> Sample Code
    -data
    @user.home\AppData\Local\ADT\workspace
```

- c. Save your changes.
- 3. [Optional:] Configure a default proxy as follows:

To define the proxy configuration of the Eclipse IDE using a configuration file, proceed as follows:

- a. Navigate to the directory where you have extracted the Eclipse IDE package and have installed the ADT features.
- b. Open the eclipse.ini file with a text editor.
- c. At the beginning of the file, insert the following code snippet:

↔ Source Code

```
-pluginCustomization plugin_customization.ini
```

- d. Save your changes.
- e. Create a new file named plugin_customization.ini with a text editor and save it in the same folder as the eclipse.ini file.
- f. Insert the following code snippet:

```
    ↔ Source Code
```

```
org.eclipse.core.net/proxyData/HTTP/host=<your_proxy_host>
org.eclipse.core.net/proxyData/HTTP/port=<your_proxy_port>
org.eclipse.core.net/proxyData/HTTPS/host=<your_proxy_host>
org.eclipse.core.net/proxyData/HTTPS/port=<your_proxy_port>
org.eclipse.core.net/systemProxiesEnabled=false
```

- g. Add the values for the proxy host and proxy port.
- h. Save your changes.

O Note

If there are no folders upon restart of the Eclipse IDE, preconfigured folders are used or created.

4. Provide the Eclipse IDE package to your IT organization for distribution.

Results

You have manually created a preconfigured Eclipse IDE package, that contains ADT features.

This package can, for example, be compressed, and centrally distributed to ABAP developers through the distribution process of your company.

(i) Note

ABAP developers can change the predefined configuration in the preferences of the Eclipse IDE. These changes are stored in their instance area or configuration area. Consequently, these preferences are **not** overwritten with the next update.

Related Information

Prerequisites [page 24] Automated Building of a Distributable Eclipse IDE Package [page 36]

6.3.2 Automated Building of a Distributable Eclipse IDE Package

You want to build an Eclipse IDE package, that is based on an existing Eclipse IDE package and contains ABAP Development Tools features, in an automated way, using an Ant script. This package can then be centrally distributed within your company.

Prerequisites

 Download and extract an Eclipse IDE package (for example, Eclipse IDE for Java Developers) from http:// www.eclipse.org r or install an SAP HANA Studio.

O Note

To ensure that the added features will be located inside the Eclipse IDE package, do **not** work in folders that require specific write authorizations on your local machine. Such a folder would be, for example, *Program Files* on Microsoft WindowsTM.

For more information, see Eclipse multi-user installs 📌 .

• Download the ADT package from the SAP Software Download Center software Portal.

Context

You want to centrally distribute an Eclipse IDE package containing ABAP Development Tools in an automated way within your company.

(i) Note

To run an Ant script, you need an Ant Runner, that is included in any Eclipse IDE package.

Execution of the Ant script automatically accepts **all** questions regarding licensing, **without** further notification or information! It also triggers the installation of all the required Eclipse features [page 25].

The steps of the subsequent procedure are only relevant for WindowsTM.

Procedure

You can define your own Ant script step-by-step **or** use a sample code [page 53] and adopt it. To develop your own Ant script, proceed as follows:

1. Create a file named installSAPtools.xml with a text editor in the location of your choice.

O NoteYou can reuse this script for upcoming releases.

2. Insert the following code snippet:

- 3. Within the target element, define the properties to declare the Eclipse IDE release you work with as well as the repositories from which you retrieve the required Eclipse features and ADT features that need to be installed as follows:
 - a. Specify the release of the used Eclipse IDE.

Add the property element and the following attributes and values:

- name with the value eclipse.release
- value with the name of the Eclipse release, for example 2022-06.

③ Note

The value of properties can be reused using the \${<property_name>} placeholder.

↔ Sample Code

```
<property name="eclipse.release" value="2022-06"/>
```

b. Configure the repositories that are used for downloading the Eclipse and ADT features.

Add another property element and the following attributes and values:

- name with the value repo
- value with the URLs of the Eclipse update site and the file location of the downloaded ADT package

③ Note

You can add several values. Use commas to separate them.

↔ Sample Code

```
<property name="repo" value="jar:file:/C:/<ADT package>!/,http://
download.eclipse.org/releases/${eclipse.release}/"/>
```

c. Configure the installable units of Eclipse (in short "iusRequiredEclipseFeatures") to define which Eclipse features are to be installed from the Eclipse update site by your Ant script.

Add the property element and the following attributes and values:

- name with the value iusRequiredEclipseFeatures
- value with the feature ID of the Eclipse feature

For more information, see Eclipse features [page 25].

↔ Sample Code

Sample code snippet that contains the feature IDs required for ADT:

d. Configure the installable units of ADT (in short "iusADT") to define which ADT features are to be installed by your Ant script.

Add the property element and the following attributes and values:

- name with the value iusADT
- value with the name of the relevant ADT feature groups

↔ Sample Code

Sample code snippet that contains the plug-in IDs of the ADT features:

```
<property name="iusADT" value="com.sap.adt.tools.bopf.feature.group,
    com.sap.adt.pitools.tlf.feature.group,
    com.sap.adt.core.feature.group,
    com.sap.adt.tools.hana.feature.group,
    com.sap.adt.wda.core.feature.group"/>
```

O Note

You can add several values. Use commas to separate them.

The following table provides you an overview of the feature IDs and ADT features to be installed:

Value	Description
com.sap.adt.tools.bopf.feature.group	ABAP Business Object Tools
com.sap.adt.pitools.tlf.feature.group	ABAP Enterprise Services And Inte- gration Development Tools
com.sap.adt.core.feature.group	ABAP Core Development Tools
com.sap.adt.tools.hana.feature.group	ABAP Development Tools for SAP HANA
com.sap.adt.wda.core.feature.group	ABAP Development Tools for Web Dynpro

4. Within the target element, define how to run the installation of the Eclipse and ADT features by adding the following code snippet:

For more information, see Installing software using the p2 director application *k*.

5. [Optional:] If you want to set certain preferences, such as proxy settings, add the propertyfile element within the target element and define access for default values of various preferences.

③ Note

ABAP developers can change the preferences at any time. These changes are stored in their instance area or configuration area. Preferences that are changed in the plugin_customization.ini are considered with a lower priority.

a. To make the script generate the plugin_customization.ini, add the following code snippet:

↔ Source Code

Sample code snippet which contains various preferences:

```
<propertyfile file="./plugin_customization.ini">
        <entry key="org.eclipse.core.net/proxyData/HTTP/host"
        value="<proxy_host>"/>
        <entry key="org.eclipse.core.net/proxyData/HTTP/port"
        value="<proxy_port>"/>
        <entry key="org.eclipse.core.net/proxyData/HTTPS/host"
        value="<proxy_host>"/>
        <entry key="org.eclipse.core.net/proxyData/HTTPS/port"
        value="<proxy_port>"/>
        <entry key="org.eclipse.core.net/systemProxiesEnabled"
        value="false"/>
        <entry key="org.eclipse.equinox.p2.ui.sdk.scheduler/enabled"
        value="false"/>
        </propertyfile>
```

The following table provides you an overview of the preferences to be enabled or disabled:

Key	Value	Description
org.eclipse.core.net/systemProxiesEnabled	true false	Enables/disables the usage of the proxy settings, that are defined by the operating sys- tem
org.eclipse.equinox.p2.ui.sdk.scheduler/ enabled	true false	Enables/disables automatic check for updates on startup of the Eclipse IDE

6. Define the location of the instance area (workspace) and configuration area as follows:

a. Within the target element, add the replace element and add the following code snippet:

O Note

The replace element defines how to search, replace, and add content within the eclipse.ini file. If the content to be replaced cannot be found, execution is terminated with an error.

In SAP HANA Studio, the file with the content to be replaced is named hdbstudio.ini.

↔ Sample Code

The replacetoken element defines the value to be replaced. The replacevalue element defines the new value to be added.

```
<replace file="./eclipse.ini" failOnNoReplacements="true">
<replacetoken>--launcher.appendVmargs</replacetoken>
<replacevalue>--launcher.appendVmargs
-configuration
@user.home\AppData\Local\ADT\configuration
-data
@user.home\AppData\Local\ADT\workspace
-pluginCustomization
plugin_customization.ini
</replacevalue>
</replace>
```

b. Within the replacevalue element, define the location of the instance area and configuration area as well as the reference for the defined plugin_customization.ini file.

O Note

To ensure that user-specific configuration data is not overwritten with the next update, define the configuration path and the location of the installation area (workspace) explicitly.

For more information, see:

- Eclipse Multi-User Installs
- The Eclipse runtime options *m*
- Define the folder to be used as configuration area.

```
{·} Sample Code
-configuration
@user.home\AppData\Local\ADT\configuration
```

• Define the folder to be used as an instance area.

-data @user.home\AppData\Local\ADT\workspace

• If you have defined a plugin_customization.ini file, define the path to the corresponding plugin_customization.ini file.

Sample Code

↔ Sample Code

```
-pluginCustomization plugin_customization.ini
```

7. After the replace element, add the following code snippet to remove all update sites from the distributable Eclipse IDE package.

```
↔ Sample Code
```

```
<delete>
  <fileset dir="./p2/org.eclipse.equinox.p2.engine/profileRegistry"
includes="**/*.repository.prefs" />
  </delete>
```

- 8. Manually copy the installSAPtools.xml file containing the Ant script into the same directory where you have downloaded and prepared the Eclipse IDE package.
- 9. Open a new command line and navigate to the directory of the Eclipse IDE package.
- 10. Execute the Ant script by triggering it from the command line.

↔ Source Code

Sample for a command in the command line:

```
.\eclipsec.exe -nosplash -application org.eclipse.ant.core.antRunner -f installSAPtools.xml
```

Results

The command starts the Eclipse Ant runner, that uses the script to create a preconfigured Eclipse IDE package, that contains the ADT features.

This package can, for example, be compressed, and centrally distributed to ABAP developers through the distribution process of your company.

→ Recommendation

SAP recommends to create a copy of the newly created Eclipse IDE package for testing the result of the script before distribution. Otherwise, any user-specific or workspace-specific settings might become part of the distributed package.

Related Information

Updating an Already Distributed Eclipse IDE Package [page 43] Apache Ant[™] Manual ♠ Installation Steps [page 27] Prerequisites [page 24] Disclaimer [page 6]

6.3.3 Updating an Already Distributed Eclipse IDE Package

Prerequisites

As a system administrator, you have already generated and distributed an Eclipse IDE package containing ADT within your company.

Your IT organization has to remove the former Eclipse IDE package before installing a new one.

O Note

Do not delete the instance area (workspace) or configuration area. Keep their folders and names consistent. Otherwise, ABAP developers might loose their preferences or workspace.

The location and name of the Eclipse IDE package itself can vary.

Context

You want to update to a newer ADT version or Eclipse release that has already been distributed.

Procedure

- 1. Download and extract the newest version of the
 - Eclipse IDE package (for example, Eclipse IDE for Java Developers) or install an SAP HANA Studio.
 - ADT package from the SAP Support portal.
- 2. Depending on your choice, proceed as follows:
 - For manual building, follow the steps described in chapter Manual Building of a Distributable Eclipse IDE Package [page 34], and continue with step 4.
 - For automated building, adjust the eclipse.release attribute and the corresponding repositories in your Ant script.
- 3. Rerun the Ant script.
- 4. Delete the former installation and distribute the new Eclipse IDE package.

(i) Note

If the configuration area and instance area (workspace) are set to a path **within** the Eclipse IDE package directory, you will loose user-specific configuration data [page 35].

Results

The updated Eclipse IDE package is available to your ABAP developers.

ABAP Development Tools runs on the latest version.

Related Information

Automated Building of a Distributable Eclipse IDE Package [page 36]

7 Post-Installation

7.1 [Optional] home Configuring SAP GUI for Java

Context

If you are using SAP GUI for Java, ensure that the qualified paths are defined for the configuration files in the preferences of SAP GUI for Java.

In addition, you can use the following VM parameters in the eclipse.ini file to configure the installation path of SAP GUI for Java:

VM Parameter	Default Value	Description
com.sap.adt.sapgui.javaGui InstallationPath= <path></path>	null	Installation path of the SAP GUI for Java in order to specify the location in case if it is not automatically detected

Procedure

In the Eclipse installation folder, open the eclipse.ini file.

At the end of the existing command lines, add the support-relevant VM parameters starting with "-D".

O Note Add the specific value after the equal mark at the end of the VM parameter. Example The following example is taken from a macOS installation:

```
-Dcom.sap.adt.sapgui.javaGuiInstallationPath=/Applications/SAP Clients/SAPGUI 7.70/
```

7.2 [Optional] Configuring VM Parameters

Home Support-Relevant VM Parameters

In case of a support issue, you can provide additional information to SAP support.

You will then might be asked define the following VM parameters in the eclipse.ini file:

VM Parameter	Default Value	Description
<pre>com.sap.adt.sapgui. winguiTraceLevel=<n></n></pre>	0	Setting in order to switch the GUI trace (DPTRACE) to the given level if Java GUI is not installed in the default folder.
		The following settings are available in order to activate the GUI trace:
		• Level 1: Errors: Only the errors are documented in the debug trace file.
		• Level 2: See level 1 plus warnings are documented in the debug trace file.
		• Level 3: A diagnose is started that writes all information in the debug trace file when an embedded trace file is started.
sapguiconfig.trace. level= <value></value>	0	Trace level that is used while parsing the SAP UI landscape configuration file using the SAPGUIConfig library.
		The following values can be set to define the data to be traced while parsing:
		• 0: Tracing is off
		• 1: URLs that are loaded while instantiation
		 2: plus details how the SAP UI landscape configuration data is loaded
		• 3: plus the content of the SAP UI landscape configura- tion data is dumped
		• 4: plus all details about internal parsing steps, for example, resolving of the message servers, and so on
		^① Note
		The higher the value the more data is traced.
		For further information, see the Frontend Installation Guide (Microsoft Windows TM) on SAP GUI Commun- ity

VM Parameter	Default Value	Description
<pre>sapguiconfig.trace. file=<full_path></full_path></pre>	<pre><workspace>\.metada ta\.plugins\com.sap .adt.sapgui.config\ sapguiconfig.log as the default location of the trace file</workspace></pre>	Full path of the trace file for the SAPGUIConfig library
com.sap.adt.sapgui. ui.win32.pipeConnec tionTimeout= <time_m s></time_m 	30.000	Timeout in ms in order to affect the SAP GUI startup process (sapguiserver.exe)
<pre>com.sap.adt.destina tions.model.landsca pe.parser.official=</pre>	true	Setting to define which parser is used for parsing the land- scape configuration file for SAP GUI integration.
<pre>value></pre>		If true, the SAP GUI parser is used. Otherwise, the ADT pro- prietary parser is used.

(i) Note

You can also add these parameters to your Ant script for automated building [page 40] of an Eclipse IDE package.

General Procedure

- 1. In the Eclipse installation folder, search and open the eclipse.ini file.
- 2. At the end of the existing command lines, add the VM parameter starting with "-D".

O Note

Add the specific value after the equal mark at the end of the VM parameter.

- 3. Save your changes.
- 4. Restart your IDE.

The IDE is restarted and the VM parameters are effective now.

Example

(a) Home In the following example, the timeout for the SAP GUI startup process is defined with 60,000 ms:

```
-Dcom.sap.adt.sapgui.winguiTraceLevel=1
-Dcom.sap.adt.sapgui.ui.win32.pipeConnectionTimeout=60000
```

Example

△ *Cloud* This is how the VM parameter entry in the eclipse.ini for enabling a cloud pilot project looks like:

-Dcom.sap.adt.tools.cloud.authentication.ui.cloud.pilot.project=true

7.3 [Optional] Configuring Accessibility Features of ADT

Eclipse and ABAP Development Tools (ADT) offer various accessibility features for use with a screen reader, such asbigger fonts, higher contrasts, for example. Some of these features are active by default; some have to be configured.

Procedure

To find more information, open the SAP - ABAP Development User Guide Concepts Accessibility Features in ADT Help Contents in your Eclipse-based IDE.

8 De-Installation

Context

To uninstall all front-end components required for running ABAP Development Tools, proceed as follows:

Procedure

- 1. To uninstall the ABAP Development Tools package, proceed as follows ...
- 2. Launch your Eclipse IDE if this has not already been done.
- 3. Choose the menu Help About...
- 4. Click the Installation Details button.
- 5. Select the corresponding nodes, such as ABAP Core Development Tools, etc.
- 6. Click the Uninstall... button.

nstalled Software Installation History Features Plug-ins Configurati	an	
		D
Name	Id	Provider
ABAP Connectivity And Integration Development Tools	com.sap.adt.pi.tlf.feature.group	SAP
ABAP Core Development Tools	com.sap.adt.core.feature.group	SAP
ABAP Development Tools for SAP HANA	com.sap.adt.tools.hana.feature	SAP
ABAP Graphic Libraries	com.sap.adt.graphics.feature.gr	SAP
Eclipse SDK	org.eclipse.sdk.ide	
🖗 EMF Edit Data Binding	org.eclipse.emf.databinding.edi	Eclipse
🖗 EMF Model Query	org.eclipse.emf.query.feature.gr	Eclipse
🖗 EMF Model Transaction Workbench Integration	org.eclipse.emf.workspace.featu	Eclipse
🖗 EMF Validation Framework	org.eclipse.emf.validation.featur	Eclipse
🖗 Graphiti Tools (Incubation)	org.eclipse.graphiti.feature.tool	Eclipse
🖗 Mylyn Commons	org.eclipse.mylyn.commons.feat	Eclipse
Mylyn Task-Focused Interface	org.eclipse.mylyn.context_featur	Eclipse
🖗 Web Dynpro ABAP Tools	com.sap.adt.wda.core.feature.gr	SAP
Web Services Tools	org.eclipse.wst.ws_ui.feature.fea	Eclipse
		*
		-
2 Update Uninstall	Properties	Close

Uninstalling ABAP Development Tools

The Uninstall Details page displays a list of feature groups that will be uninstalled.

7. To start the uninstall process, choose *Finish*.

Related Information

Support Platform Matrix [page 17]

9 Support Case

9.1 Providing Additional Information for Analyzing an Error

The Trace Configuration enables you to provide SAP additional information in case of errors in locations such as Debugger, Coverage, ABAP source code, etc.

Context

You set the Trace Configuration in the *Preferences* depending on the error location, proceed as follows:

Procedure

- 1. In the Eclipse workbench, choose the menu Window Preferences .
- 2. In the Preferences window, select ABAP Development Trace Configuration .
- 3. In the *Level* list box, choose *Info*.
- 4. In the *Location* area, open the ABAP Development Tools tree and choose the corresponding entry, for example, Profiler UI.
- 5. Confirm with OK.

Results

Now, the Eclipse-based IDE traces additional information which you can collect and provide as a ZIP file to the SAP support.

③ Note

Only enable the Tracing Configuration in case of a specific error. Because, tracing is intense in memory consumption, deselect all locations after creating the support information file. Otherwise your client might work slower or after the next restart of the client, a corresponding dialog is opened.

Related Information

Getting Support Information [page 52]

9.2 Getting Support Information

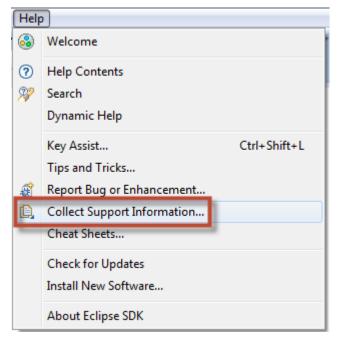
Context

Should errors occur in connection with ABAP Development Tools for which you, as an SAP customer, require more detailed support from SAP, it is of considerable importance that you provide all the required data for such a support case in order to speed up the troubleshooting process. For this purpose, ABAP Development Tools provides a comfortable tool support solution. With a few simple mouse clicks, you can generate a support information file. This file contains all the relevant data for your IDE or GUI version, as well as information on preference settings and technical system environment data. You can then add this support file to your OSS problem message as an attachment.

To collect the support information, proceed as follows:

Procedure

1. In the Eclipse workbench, choose the menu Help Collect Support Information...



Launching the Support Information Collection using the menu

2. In the dialog box that appears, specify the location of the support file and choose **Finish**.

10 Additional Information

10.1 Installing Plug-ins from Third Parties

Your installation of Eclipse can be enriched with additional plug-ins from various providers (so called third party plug-ins) alongside ABAP Development Tools (ADT).

Risks

These plug-ins can gain control over your client installation or even your complete front-end PC.

Protection Measures

You should carefully decide on plug-ins that you are going to install. For this, only use plug-ins from trusted sources and which are using signatures.

→ Recommendation

If you do not trust third party plug-ins for Eclipse in general, we recommend managing this via your corporate requirements.

10.2 Sample Code for Building an Ant Script

The following sample code can be used as an example how to develop an Ant script for automated building of a distributable Eclipse IDE package.

Note

To make the sample code executable, you need to adopt the relevant placeholders and the name of used elements.

↔ Sample Code

```
<property name="iusRequiredEclipseFeatures"</pre>
             value="org.eclipse.emf.databinding.edit.feature.group,
                 org.eclipse.emf.query.feature.group,
                 org.eclipse.emf.workspace.feature.group,
                 org.eclipse.emf.validation.feature.group,
                 org.eclipse.graphiti.feature.feature.group,
                 org.eclipse.wst.ws_ui.feature.feature.group,
                 org.eclipse.zest.feature.group"/>
         <property name="iusADT" value="com.sap.adt.tools.bopf.feature.group,"
                 com.sap.adt.pitools.tlf.feature.group,
                 com.sap.adt.core.feature.group,
                 com.sap.adt.tools.hana.feature.group,
com.sap.adt.wda.core.feature.group"/>
         <java classname="org.eclipse.equinox.launcher.Main"
failonerror="true">
             <classpath>
              <fileset dir="plugins">
                      <include name="org.eclipse.equinox.launcher_*.jar"/>
              </fileset>
             </classpath>
             <arg value="-application"/><arg</pre>
value="org.eclipse.equinox.p2.director" />
             <arg value="-repository"/><arg value="${repo}" />
<arg value="-installIU"/><arg value="$</pre>
{iusRequiredEclipseFeatures}" />
             <arg value="-installIU"/><arg value="${iusADT}" />
         </java>
         <propertyfile file="./plugin_customization.ini"></propertyfile file="./plugin_customization.ini">
             <entry key="org.eclipse.core.net/proxyData/HTTP/host"</pre>
value="<proxy_host>"/>
             <entry key="org.eclipse.core.net/proxyData/HTTP/port"</pre>
value="<proxy_port>"/>
             <entry key="org.eclipse.core.net/proxyData/HTTPS/host"</pre>
value="<proxy_host>"/>
            <entry key="org.eclipse.core.net/proxyData/HTTPS/port"</pre>
value="<proxy_port>"/>
             <entry key="org.eclipse.core.net/systemProxiesEnabled"</pre>
value="false"/>
         </propertyfile>
         <replace file="./eclipse.ini" failOnNoReplacements="true">
             <replacetoken>--launcher.appendVmargs</replacetoken>
             <replacevalue>--launcher.appendVmargs
                          -configuration
                          @user.home\AppData\Local\ADT\configuration
                          -data
                          @user.home\AppData\Local\ADT\workspace
                          -pluginCustomization
                          plugin_customization.ini
             </replacevalue>
         </replace>
         <delete>
             <fileset dir="./p2/org.eclipse.equinox.p2.engine/profileRegistry"</pre>
includes="**/*.repository.prefs" />
        </delete>
    </target>
</project>
```

Related Information

Additional Information [page 53]

Automated Building of a Distributable Eclipse IDE Package [page 36]

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