



Installation Guide

SAP NetWeaver 2004s Standalone Engine Search and Classification (TREX) Single Host

Target Audience

- System administrators
- Technology consultants

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Documentation on SAP Service Marketplace

You can find this documentation at service.sap.com/instguidesNW2004s

Icons in Body Text

Icon	Meaning
	Caution
	Example
	Note
	Recommendation
	Syntax

Additional icons are used in SAP Library documentation to help you identify different types of information at a glance. For more information, see *Help on Help → General Information Classes and Information Classes for Business Information Warehouse* on the first page of any version of *SAP Library*.

Typographic Conventions

Type Style	Description
<i>Example text</i>	Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options. Cross-references to other documentation.
Example text	Emphasized words or phrases in body text, graphic titles, and table titles.
EXAMPLE TEXT	Technical names of system objects. These include report names, program names, transaction codes, table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE.
Example text	Output on the screen. This includes file and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade and database tools.
Example text	Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.
<Example text>	Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system.
EXAMPLE TEXT	Keys on the keyboard, for example, F2 or ENTER.

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Installing Search and Classification (TREX) – Single Host

Purpose

This guide describes the single-host installation of *SAP NetWeaver 2004s Search and Classification (TREX)*. The target audience for the guide consists of system administrators and consultants.

The guide is structured as follows:

- The section [Implementation Considerations \[Page 7\]](#) explains what you need to take into account before the installation.
- The section [Naming Conventions \[Page 14\]](#) contains information on special naming conventions for this guide.
- The section [Checklists for the Installation \[Page 15\]](#) contains a separate checklist for each installation variant, including an overview of the installation steps.
- The section [Server Side \[Page 45\]](#) describes how you plan, prepare, and carry out the installation of the server software. It also describes the configuration steps that you have to carry out immediately after the installation.
- The section [Client Side \[Page 55\]](#) describes how you carry out the installation of the client software, if this is necessary. It also describes the configuration steps that you have to carry out on the client side.
- The section [Installation Check \[Page 57\]](#) describes how to check whether the installation of the server software was successful.
- The section [Additional Information \[Page 60\]](#) contains information on troubleshooting problems that might occur during the installation and explains how to control the installation from another host. It also describes how to start, stop, and uninstall TREX.

Constraints

Additional Configuration Steps Depending on the Application

Additional configuration steps may be necessary depending on the application for which you are installing TREX. These additional steps are not described in this guide. You can find them in the documentation on the application in question.

Implementation Considerations

Refer to the following information before starting the installation.

Master Guides

If you are installing TREX as part of a mySAP Business Suite solution, a business scenario, or an IT scenario, familiarize yourself with the relevant master guide before beginning the installation.

Master guides are the central documents for implementing mySAP Business Suite solutions, business scenarios, and IT scenarios. They list the components and third-party applications that are necessary for a business scenario or an IT scenario, and refer to any necessary installation and upgrade guides. They also define the installation sequence.

Integration of TREX and Applications That Use It

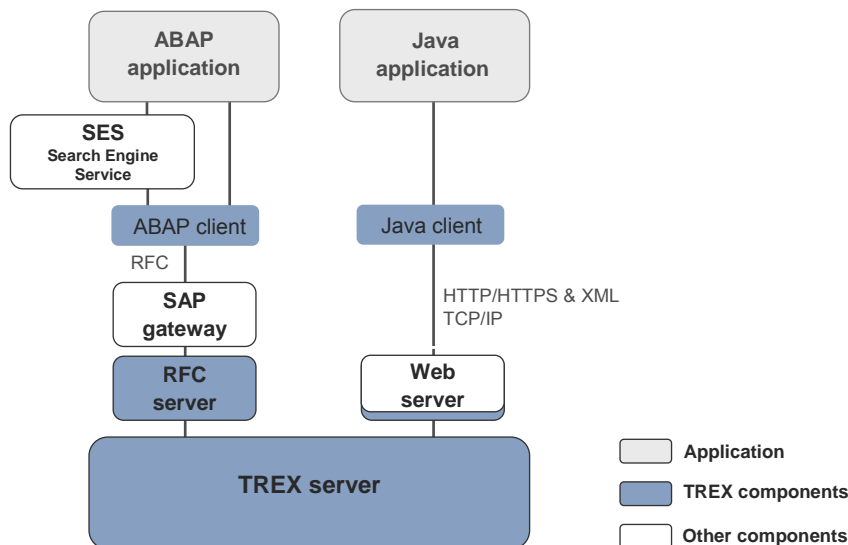
TREX is based on a client/server architecture. The client software is integrated into the application that uses the TREX functions, and allows communication with the TREX servers. The TREX servers execute the requests of the clients: They index and classify documents and respond to search queries.

TREX offers an ABAP and a Java client. This allows ABAP and Java applications to use TREX functions. ABAP and Java applications communicate with the TREX servers using different protocols and components.

- ABAP applications communicate with TREX servers using the RFC protocol. Communication takes place using an instance of the SAP Gateway and an RFC server.
- Java applications communicate with TREX using the HTTP or HTTPS protocol. This communication takes place using a Web server that is enhanced with TREX-specific functions.

RFC and Web servers have similar functions: They receive the requests of the application, convert them to a TREX-internal format, and send them on to the responsible TREX server.

The graphic below depicts the interaction between applications and TREX.





There is no dependency between TREX and the application using TREX with regard to the operating system used. You can install TREX on a different operating system to the application that accesses TREX.



Use all installable units within SAP NetWeaver that have the same support package level. Only by using the same support packages you can ensure the integration and smooth collaboration between all systems, stand-alone engines, and clients within SAP NetWeaver.

Connecting TREX to More Than One Application

In principle, you can connect one TREX system to more than one application.

Note the following:

- The TREX system must have appropriate dimensions so that it can process the load of all the applications.
- You must take organizational measures to ensure that the applications use separate index namespaces.



Business Intelligence (BI) Accelerator

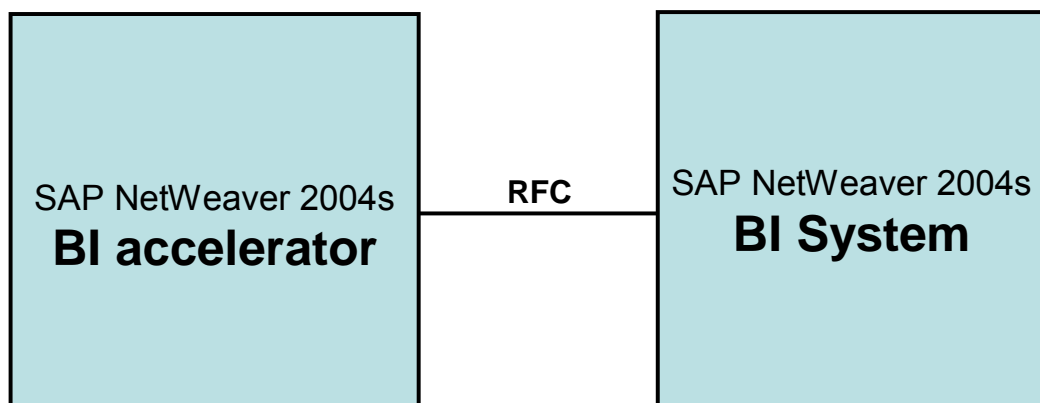
BI Accelerator: a Key Functionality for High-Performance Analytics

The BI accelerator is based on TREX technology. It is the aggregation engine for the accelerator functionality of SAP NetWeaver 2004s Business Intelligence (BI), a key functionality for high-performance analytics, which belongs to the *Enterprise Data Warehousing* IT scenario.

For more information see the SAP Net Weaver Master Guide on *SAP Service Marketplace* service.sap.com/instguidesNW2004s.

A TREX aggregation engine for processing structured business data powers this functionality. The data of the BI InfoCubes is replicated to the TREX engine and stored as TREX indexes. BI accelerator benefits companies that handle large volumes of data. The average response time is significantly improved in comparison with traditional approaches.

The following graphic depicts the relationship between the BI accelerator and the BI System:



How To Use, Install, and Update the BI Accelerator

- **Use only with BI**

The BI accelerator is based on TREX technology. For the BI accelerator, you require an installation based on a 64-Bit architecture. The hardware partners deliver this variant in preconfigured form as the BI accelerator box. You must note that a TREX installation configured for searching metadata and documents based on a 32-Bit architecture cannot be used for the BI accelerator. In turn, you cannot use a BI accelerator box to search metadata and documents. In order to use both the search functions and the BI accelerator, you require two separate installations.



You **cannot** use the BI accelerator for the regular TREX search and classification functions.

In order to use the preinstalled BI Accelerator Box, you must enter the fixed RFC destination defined for this purpose (default: TREX_HPA) in table RSADMINA.

- **Installation on preconfigured hardware**

The BI accelerator is a special LINUX 64-Bit version of SAP NetWeaver 2004s Search and Classification (TREX), which is delivered on preconfigured hardware. All installation and configuration steps will be done during the preconfiguration of the hardware by the hardware vendor.

- **Download update from SAP Service Marketplace**

BI customers have to update and patch the BI accelerator. They can download the updates and patches for the BI accelerator from the SAP Service Marketplace service.sap.com/swdc → Download → Support Packages and Patches → Entry by Application Group → SAP NetWeaver → SAP NETWEAVER → SAP NETWEAVER 04s → Entry by Component → Search and Classification (TREX) → TREX 7.0 → Linux on x86_64 64bit



For more **information** about the BI accelerator, see the following SAP notes:

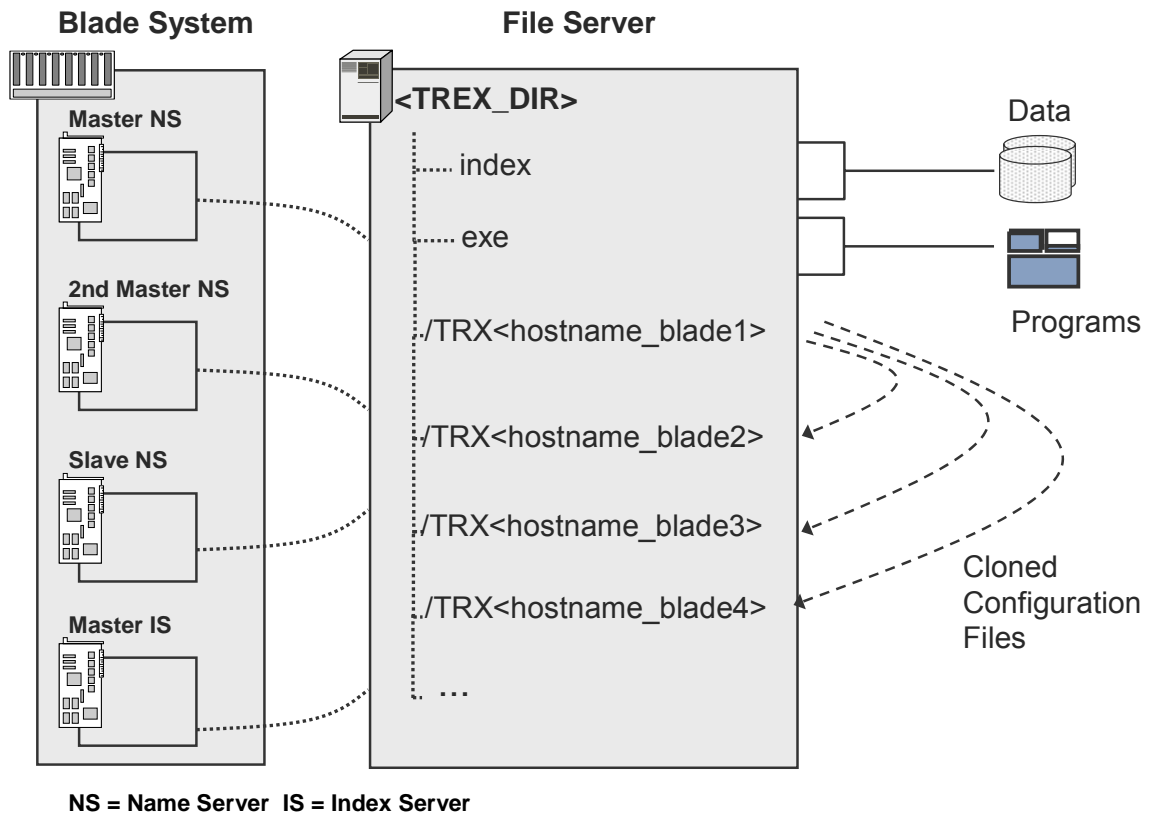
- 883726 TREX 7.0: Central Note BI accelerator
- 875400 TREX 7.0: Installing SAPNetWeaver2004s BI accelerator
- 883725 TREX 7.0: Updating SAP NetWeaver 2004s BI accelerator

BI accelerator: Preconfigured Blade System

The BI accelerator is installed on a preconfigured blade system. A blade system consists of hosts in the form of server blades. The server blades are connected to centralized disk storage. This is referred to here as a file server, regardless of the underlying hardware.

The special feature of a TREX installation on a blade system is that both the TREX software and the TREX data can be stored centrally. This means that the software is installed only once on the file server. Maintaining the system is efficient because you have to implement software updates once only.

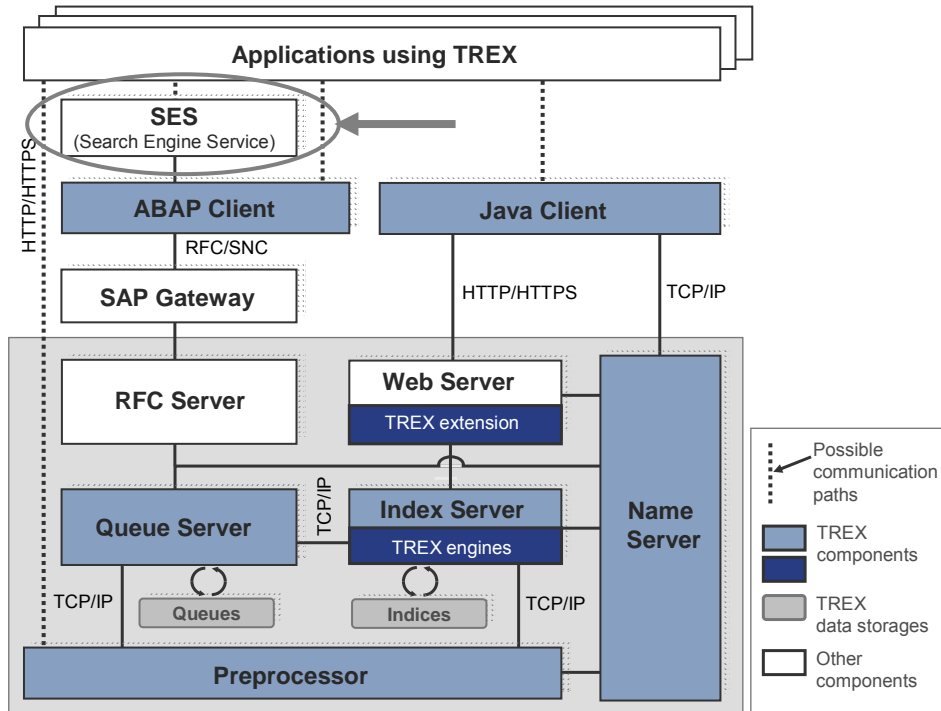
All server blades on which TREX is running access the same program files. However, each server blade has its own configuration files. The configuration files in the directory <TREX_DIR> are only used as templates. A script creates a separate subdirectory for each server blade and copies the configuration files to this subdirectory. The graphic below depicts how data, programs, and configuration files might be stored in a BI accelerator blade system.



Search Engine Service (SES)

The Search Engine Service (SES) enables users to search for business objects using TREX. SES is installed as part of the *SAP NetWeaver Application Server (NW AS)* together with the *AS (Application Server)* usage type. SES accesses TREX functions through the TREX ABAP client. SES replicates the business objects from the database for the ABAP application to TREX, so that it can apply TREX search functions to them. When a user enters a search query, the TREX system responds to it, not the database for the ABAP application.

The graphic below shows where the search engine service is integrated in the TREX architecture:



Prerequisites

The following configuration steps must be completed in order for an SAP application to be able to use SES for searching business objects:

- A TREX system is installed and accessible through an SAP gateway.
- Customizing for the search engine service has been completely defined.
- The indexes have been created and are active.
- The indexing program `COM_SE_DISPATCHER` is scheduled as a periodic background job.

As administrator, you complete the initial configuration of the search engine service and monitor it during production operations.

For more information about customizing the SES, see *SAP Solution Manager* in transaction `SOLAR_LIBRARY` and in an SAP system in transaction `SES_ADMIN`, from which you can go directly to the *Implementation Guide (Reference IMG)*. To do this, choose *Menu* → *Goto* → *Customizing* → *IMG*.



Minimal and Distributed TREX Systems

Minimal TREX System (Single-Host Installation)

A minimal system consists of one TREX instance (**one** installation of the server software). You can use a minimal system as a demo, test, and production system.



For a production system, SAP recommends that you install the server software on a single host that is used exclusively for TREX.



If TREX is running on the same host as other components, you must make sure of the following:

- There is enough main memory for all components.
- TREX can use the required main memory space exclusively.

Sizing

The required hardware for the server software depends on the following factors:

- How many documents of what type are to be indexed?
- What quantities of documents are to be indexed initially, and what quantities during routine operation?
- How many search queries are expected? How many parallel search queries are expected?

Plan the required number of hosts and the equipping thereof with your SAP hardware partner. Use the information in [Hardware and Software Requirements \[Page 19\]](#) as a basis for this.

Distributed TREX System (Multiple Host Installation)

Search and Classification (TREX) consists of a client component and a server component. The server component is based on a flexible architecture that allows a distributed installation. You can use a distributed installation to achieve the following:

- Load balancing

You can distribute the search and indexing load among several hosts.

- High availability

You can make sure that both indexing and searching are highly available.



Your TREX system can quickly reach its performance limit if you install TREX on a single server in a productive scenario with large document sets and a large number of search queries. SAP therefore recommends that you calculate the expected load and availability requirements for your TREX system early on in the planning process and start with a distributed TREX installation immediately if that is what you require.



In a distributed scenario, the same TREX version and patch level must run on all TREX hosts. Mixed installations with different TREX versions are not supported.



For more information on installing and configuring a distributed TREX system, see the *SAP NetWeaver 2004s Distributed Search and Classification (TREX) Systems Installation Guide* on the *SAP Service Marketplace* at service.sap.com/instguidesNW2004s.



Installation of Server and Client Software

Installation of the Server Software

The TREX servers can be used by one or more applications. When you are installing TREX, you need to know the type of application and communication protocol. There are the following possibilities:

- The TREX servers are only used by Java applications.
Since Java applications communicate with the TREX servers using HTTP, you definitely need to carry out the installation steps that enable an HTTP connection.
- The TREX servers are only used by ABAP applications.
Since ABAP applications communicate with the TREX servers using RFC, you definitely need to carry out the installation steps that enable an RFC connection.
- The TREX servers are used by Java and ABAP applications.
In this case, execute the installation steps necessary for an HTTP and an RFC connection.



The documents to be indexed are sent by an ABAP application to TREX. The search takes place using a Web application (Java application).

This guide contains a checklist with an overview of necessary installation steps for each case.

Installation of the Client Software

- ABAP client
The ABAP client is part of the SAP system, and must not be installed separately. The necessary configuration is described in this guide.
- Java client
As a *TREX service*, the Java client is part of the J2EE engine of the SAP NetWeaver Application Server and does not have to be installed separately. The necessary configuration is described in this guide.



Naming Conventions

The following naming conventions are valid for this documentation:

Terminology

Term	Meaning
TREX host	Host on which the TREX server software is installed
TREX instance	One installation of the TREX server software

Variables

Variable	Meaning
<SAPSID>	System ID in uppercase letters
<sapsid>	System ID in lowercase letters
<TREX_DIR>	Installation directory for TREX. The path to the directory is: <ul style="list-style-type: none"> • On UNIX /usr/sap/<sapsid>/trx<instance_number> • On Windows <disk_drive>:\usr\sap\<SAPSID>\TRX<instance_number>
<DVD_DIR>	Directory under which you insert a DVD.
<OS>	Name of the operating system in a path.
User <sapsid>adm	Operating system user that you log on with to administrate TREX.
User SAPService<SAPSID>	Operating system user under which the TREX processes run.
User <gwsadm>	Operating system user on which the SAP Gateway is running.
User <j2eeadm>	Operating system user that you use to log on to the host on which the J2EE Engine is running.

The following example shows how variables are used.



Go to the directory <DVD_DIR>/UNIX/<OS>.

If the DVD is inserted under /sapdvd1 and you are using the operating system AIX, you have to go to the directory /sapdvd1/UNIX/AIX_64.

Path specifications

The forward slash (/) is usually used in path specifications such as <TREX_DIR>/<host_name>/saprofile.ini.

Commands

Commands such as script calls are sometimes distributed over several lines in this documentation. When you execute the commands, enter them in one line.



Checklists for the Installation

Purpose

Use the tables below as checklists for the installation of the system. All necessary installation phases (planning, preparation, installation, and post-installation activities) are listed in these tables.

Use the links to the general descriptions of actions and to additional information that will help you when executing the actions. By doing this, you ensure that you do not overlook any important information.

Process Flow

1. Print the relevant checklists:
 - [Installation with HTTP Connection \[Page 15\]](#)
 - [Installation with RFC Connection \[Page 16\]](#)
 - [Installation with HTTP and RFC Connections \[Page 17\]](#)
2. Carry out the installation steps in the order specified in the tables.
 - When carrying out an obligatory step during the installation, follow the link to the relevant section.
 - Then carry out the work steps described there.
 - When the installation step has been successfully completed, place a check (✓) next to the relevant entry in the table in order to record your progress.
 - Then continue with the next step listed in the table.



Installation with HTTP Connection

Server Side

Installation Planning

✓	Action
	Check the hardware and software requirements [Extern] .
	Check what documentation [Page 22] you need for the installation.

Installation Preparations

✓	Action
	If you want to install multiple TREX instances, read the information [Page 27] on this.
	Prepare the system for the SAPinst interface [Page 28] .
	Check whether there is sufficient disk space [Page 29] for installing the TREX software.

Installation

✓	Action
	Install TREX with SAPinst [Page 34] .

Post-Installation Activities

✓	Action
	Configuring TREX for the System Landscape Directory (SLD) [Page 46]
	General UNIX Configuration
	Check the UNIX kernel parameters [Page 48] and change them if necessary.
	TREX starts automatically if you have restarted the host. If you have not restarted the host, start TREX manually (see Starting and Stopping TREX on UNIX [Page 64]).
	General Windows Configuration
	On Windows no actions are needed to start TREX. The SAP service for the corresponding TREX instance is registered as a Windows service and starts automatically after installation.

Client Side

Configuration

✓	Action
	Enter the address of the TREX name server [Page 55] in the Java client configuration settings (<i>TREX service</i> in J2EE).
	Check the proxy settings [Page 56] .



Installation with RFC Connection

Server Side

Installation Planning

✓	Action
	Check the hardware and software requirements [Extern] .
	Check what documentation [Page 22] you need for the installation.

Installation Preparations

✓	Action
	If you want to install multiple TREX instances, read the information [Page 27] on this.
	Prepare the system for the SAPinst interface [Page 28] .
	Check whether there is sufficient disk space [Page 29] for installing the TREX software.

Installation

✓	Action
	Install TREX with SAPinst [Page 34] .

Post-Installation Activities

✓	Action
	Configuring TREX for the System Landscape Directory (SLD) [Page 46]
	General UNIX Configuration
	Check the UNIX kernel parameters [Page 48] and change them if necessary.
	TREX starts automatically if you have restarted the host. If you have not restarted the host, start TREX manually (see Starting and Stopping TREX on UNIX [Page 64]).
	General Windows Configuration
	On Windows no actions are needed to start TREX. The SAP service for the corresponding TREX instance is registered as a Windows service and starts automatically after installation.
	Configuration of the RFC Connection
	Define the SAP system user. (See Defining the SAP System Users [Page 52] .)
	Determine the connection data for the SAP system. (See Determining the SAP System Connection Information [Page 52] .)
	Configure the RFC connection in the TREX admin tool (See Configuring the RFC Connection in the TREX Admin Tool [Page 53]).

Client Side**Configuration**

✓	Action
	On the client side, no further configuration steps are required.

**Installation with HTTP and RFC Connections****Server Side****Installation Planning**

✓	Action
	Check the hardware and software requirements [Extern] .
	Check what documentation [Page 22] you need for the installation.

Installation Preparations

✓	Action
---	---------------

	If you want to install multiple TREX instances, read the information [Page 27] on this.
	Prepare the system for the SAPinst interface [Page 28] .
	Check whether there is sufficient disk space [Page 29] for installing the TREX software.

Installation

✓	Action
	Install TREX with SAPinst [Page 34] .

Post-Installation Activities

✓	Action
	Configuring TREX for the System Landscape Directory (SLD) [Page 46]
	General UNIX Configuration
	Check the UNIX kernel parameters [Page 48] and change them if necessary.
	TREX starts automatically if you have restarted the host. If you have not restarted the host, start TREX manually. (See Starting and Stopping TREX on UNIX [Page 64] .)
	General Windows Configuration
	On Windows no actions are needed to start TREX. The SAP service for the TREX instance installed is registered as a Windows service and starts automatically after installation.
	Configuration of the RFC Connection
	Define the SAP system user. (See Defining the SAP System Users [Page 52] .)
	Determine the connection data for the SAP system. (See Determining the SAP System Connection Information [Page 52] .)
	Configure the RFC connection in the TREX admin tool (stand-alone). (See Configuring the RFC Connection in the TREX Admin Tool [Page 53] .)

Client Side – Java Application

Installation and Configuration

✓	Action
	Enter the address of the TREX name server [Page 55] in the Java client configuration settings (<i>TREX service</i> in the J2EE engine).
	Check the proxy settings [Page 56] .

Client Side – ABAP Application

Configuration

✓	Action
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On the client side, no further configuration steps are required.
--



Installation Planning

Purpose

The following sections contain information that is relevant for the installation planning.



Hardware and Software Requirements



The tables below contain the hardware and software requirements for the TREX server software.



The requirements for hardware and software listed here are valid for a TREX installation on a single host (single server system). The requirements for a distributed system that supports load-balancing and high availability are listed in the guide for the installation and configuration of a distributed TREX system. You can find the *Installation Guide – SAP NetWeaver 2004s TREX Multiple Hosts* on the *SAP Service Marketplace* at service.sap.com/instguidesNW04s → Installation.


Hardware Requirements

Requirement Type	Requirement
Hard disk capacity:	<ul style="list-style-type: none"> • SAPinst work directory You require the following for the installation tool SAPinst: <ul style="list-style-type: none"> ○ On UNIX, 200 MB in temporary directories or in a directory chosen by you. ○ On Windows, 200 MB in the directory <code>C:\Program Files</code> • TREX directory You need the following for the TREX software: <ul style="list-style-type: none"> ○ On UNIX, at least 1 GB in the directory <code>/usr/sap.</code> ○ On Windows, at least 1 GB in the directory <code><disk_drive>:\usr\sap</code> <p>You also need disk space in this directory for the trace files that TREX writes during routine operation</p> • Index directory A minimum of 80 GB, depending on the number and type of documents to be indexed. If documents exist in different formats (Microsoft Word, PDF, and so on), the index needs approximately half as much disk space as the documents. For pure HTML documents, the index needs about twice as much disk space as the

Requirement Type	Requirement
	<p>documents. In addition, the same amount of disk space as for the index is needed temporarily for the optimizing process.</p>  <p>A document set that consists only of HTML documents and has a total size of 10 GB generates an index size of 20 GB (2 x 10GB). An additional 20 GB disk space is needed temporarily for optimization. Therefore, you need 40 GB disk space altogether: 20 GB permanently and 20 GB temporarily.</p> <ul style="list-style-type: none"> • Queue directory <p>The queues require approximately three quarters of the disk space required by the indexes. The documents to be indexed are kept temporarily in the queue directory before being forwarded to actually be indexed.</p> <p>In the case of an installation with an RFC connection, you can use TREX with or without a queue server. If you are not using a queue server, the queue directory is not relevant. SAP Note 658052 contains information on which configuration is suitable for which application.</p> <p>The three directories can be located on different partitions. The index directory and queue directory can also be located on a file server. The TREX host must be able to access the file server as quickly as it can access the local hard drive.</p>
RAM	<ul style="list-style-type: none"> • Demo or test system: At least 1 GB. • Production system: 4 GB, at least 2 GB per CPU. <p>With two index servers per TREX instance: At least 4 CPUs.</p>  <p>The amount of main memory that is actually used depends on several factors. For example, in the case of the index server influencing factors are index size, number of parallel search requests, and size of the number of hits.</p>
CPU	<p>Demo or test system:</p> <ul style="list-style-type: none"> • AIX: At least two POWER3 processors of the most recent model • HP-UX: At least two PA-RISC processors of the most recent model • Linux: At least one Pentium III processor of the most recent model • Sun Solaris: At least two Ultra-SPARC II processors of the most recent model • Windows: At least one Pentium III processor of the most recent model


Requirement Type	Requirement
	<p>Production system</p> <ul style="list-style-type: none"> • AIX: At least two POWER4 processors of the most recent model • HP-UX: Recommended: Two PA-RISC processors of the most recent model • Linux: Recommended four, at least two Intel Xeon processors (or equivalent) of the most recent model • Sun Solaris: Recommended: Two Ultra-SPARC III processors of the most recent model • On Windows: Recommended four, at least two Intel Xeon processors (or equivalent) of the most recent model

Windows: Software Requirements

Requirement Type	Requirement
Operating system	<p>Following Windows version:</p> <ul style="list-style-type: none"> • Microsoft Windows Server 2003 32 bit (US English version) Service Pack 1 (SP1) <p style="text-align: center;"></p> <p style="text-align: center;">For security reasons, the supported partition installed on Windows is NTFS (NT file system) not FAT32 (file allocation table).</p>
Python	<p>Python 2.4. A Python version by ActiveState is part of the delivery. If Python has not been installed, it is installed by the TREX setup program in the directory <TREX_DIR>\exe\Python.</p>
Web server	<p>Only relevant for an installation with an HTTP connection.</p> <p>Microsoft Internet Information Server (IIS) 5.0 or 6.0</p>

UNIX: Software Requirements

Requirement Type	Requirement
------------------	-------------

Requirement Type	Requirement
Operating system	<p>One of the following UNIX versions:</p> <ul style="list-style-type: none"> • AIX 5.2 and 5.3 64 Bit • HP-UX <ul style="list-style-type: none"> ○ HP-UX 11i (11.11) 64 Bit with patch PHSS_32573 ○ HP-UX 11.23 for PA-RISC with patch PHSS_31855 • Sun Solaris 9 64 Bit • SUSE LINUX Enterprise Server 9 / Service Pack 1 (SP1) • Red Hat Enterprise Linux AS 4 <p style="text-align: center;"></p> <p style="text-align: center;">TREX only supports LINUX distributions that have been released by SAP.</p>
Python	Python 2.4. A Python version from ActiveState is part of the delivery and is installed by the TREX setup program in the <TREX_DIR>/exe/Python directory.
Web server	<p>Only relevant for an installation with an HTTP connection.</p> <p>Apache Web Server 1.3.29: The Web server is part of the delivery, and is installed by the TREX setup program in the <TREX_DIR>/Apache directory.</p>



Required Documentation

You require this installation guide and the following additional documentation for the installation:

- SAP Notes on Installation
- The *SAPinst Troubleshooting* guide

SAP Notes on Installation

You **must** read the SAP Notes on installation **before** you begin the installation. The SAP Notes contain current installation information and corrections to the installation documentation.

Make sure that you use the current version of the SAP Notes. The SAP Notes can be found in the *SAP Service Marketplace* at service.sap.com/notes.

Relevant SAP Notes

SAP Note Number	Title	Comments
843360	Installing TREX 7.0	Contains information on the installation of TREX 7.0.
892474	TREX 7.0: RFC errors reported by TREX admin tool (standalone)	Contains information about correct using of TREX admin tool (standalone)
658052	TREX 6.0/6.1/7.0: Additional Information About TREX ABAP Client	Relevant for an installation with an RFC connection: Contains recommendations for using the

		queue server and information on which application uses which version of the ABAP client. This information is relevant for configuration steps after the TREX installation.
895503	TREX 7.0 SP4/SP5: Access Rights and User (UNIX)	Contains information for enabling access rights and users for installation of TREX 7.0 SP4 or SP5
898401	TREX 7.0: Addressing 3GB Working Memory under Windows	Contains information on how to enable 3 GB working memory under Windows
917389	TREX 7.0: TREX application pool in IIS not started	

SAPinst Troubleshooting Guide

The *SAPinst Troubleshooting* guide contains current information on how to avoid installation failure and how to proceed when an installation fails. For more information, see the documentation on the *SAP Service Marketplace* at service.sap.com/sapinstfeedback.



SAP recommends reading this documentation before beginning the installation.



Installation Preparations

Purpose

The following sections describe the steps you carry out before the TREX installation.



Global File System and TREX Instances

Purpose

The TREX server software comprises two parts:

- **Global file system**

This is a directory structure, in which information about the TREX system instances is stored. For example, this information is required by management tools to start the TREX system.

- **Installation files for the TREX instance**

These are the TREX program files, configuration files, and so on.

The global file system must be highly available. All instances of a TREX system must have permanent access to it. When installing TREX and planning a distributed TREX system, you must decide which host the global TREX file system should be located on.



For information about installation and configuration of a distributed TREX system, see the *Installation Guide – SAP NetWeaver 2004s TREX Multiple Hosts* on *SAP Service Marketplace* at service.sap.com/instguidesnw04s → Installation.

TREX Instance and SAP System Profile Directories

During the installation of the global file system and TREX instances, the following directories are important:

- SAP system profile directory in the global file system:
 - On UNIX /<SAP System Mount Directory>/<sapsid>/profile
 - On Windows <SAPGLOBALHOST>\sapmnt\<SAPSID>\SYS\profile
- Installation directory for the TREX instance:
 - On UNIX /usr/sap/<sapsid>/trx<instance_number>
 - On Windows
<disk_drive>:\usr\sap\<SAPSID>\TRX<instance_number>

Installation Procedure

You distinguish between the following scenarios when installing the global file system and the TREX instance:

1. [Installing a Central TREX Instance \[Page 35\]](#) (installing a global file system and a TREX instance)
2. [Installing a TREX Dialog Instance \[Page 39\]](#) (installing only a TREX instance)
3. [Installing a Global File System \[Page 43\]](#) (installing a global file system only)

1. Installing a Central TREX Instance (installing a global file system and a TREX instance)

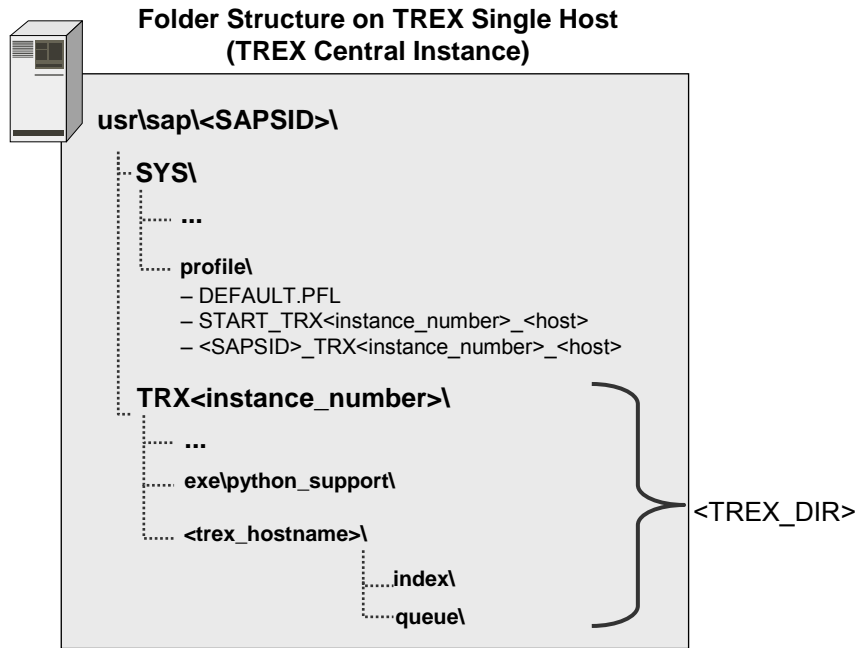
In this scenario, you install a central TREX instance. A central TREX instance consists of the installation of a TREX instance together with a global file system on a local host. Basic information about a TREX landscape is stored in the directory for the SAP system profiles for the global file system. If you set up a new TREX system for a production scenario or if you are installing TREX for the first time, you always start with the installation of a central TREX instance. In a distributed landscape with decentralized data storage and more than one TREX instance, you must install the central TREX instance on the same host as the TREX master name server. TREX is then administrated, started, and stopped from the central TREX instance.



For details on configuring a distributed TREX system, see the *Installation Guide – SAP NetWeaver 2004s TREX Multiple Hosts* on *SAP Service Marketplace* at service.sap.com/instguidesnw04s.

Directory structure and files

If you install the global file system and the TREX instance on a single host as a central TREX instance, a directory structure and SAP system profiles are created on Windows as shown in the graphic below:



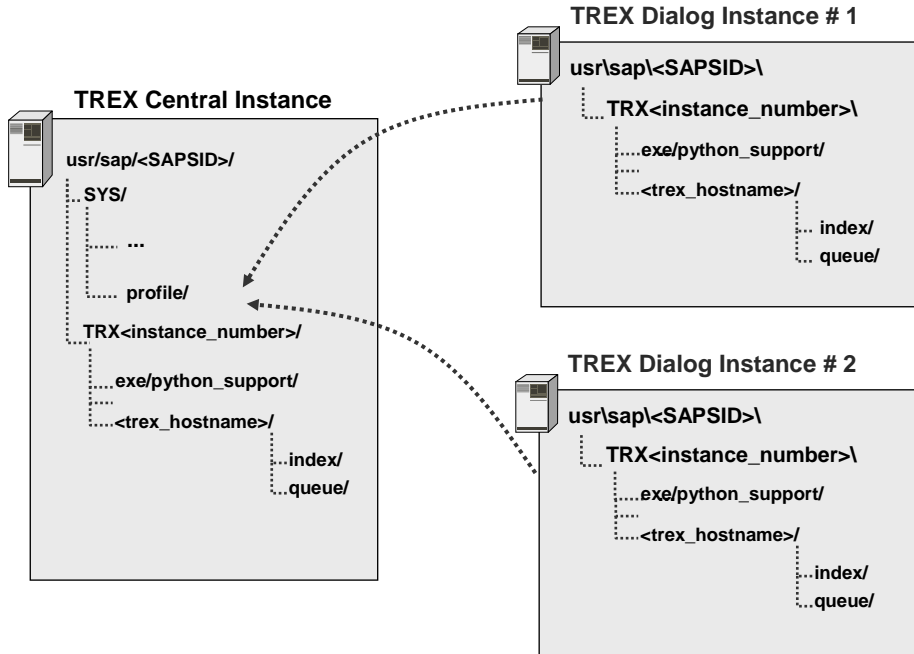
2. Installing a TREX Dialog Instance (installing only a TREX instance)

In this scenario, you install a TREX dialog instance. A TREX dialog instance consists of a TREX instance without a global file system on the local host. You install a TREX dialog instance to add one or more TREX instances to an existing TREX system landscape. During installation, you must specify the path to the directory for the SAP system profiles for the global file system. In the default scenario, the global file system and the directory for the SAP system profiles are located on the same host that the central TREX instance was installed on.

In this case, the central TREX instance and the TREX dialog instance form a unit from an administration perspective. This is visible in that they both have the same system ID (<SAPSID>) and use the same global file system.

Directory structure and files

If you install a TREX dialog instance and connect it to an existing central TREX instance, there are directory structures on Windows as illustrated in the graphic below:

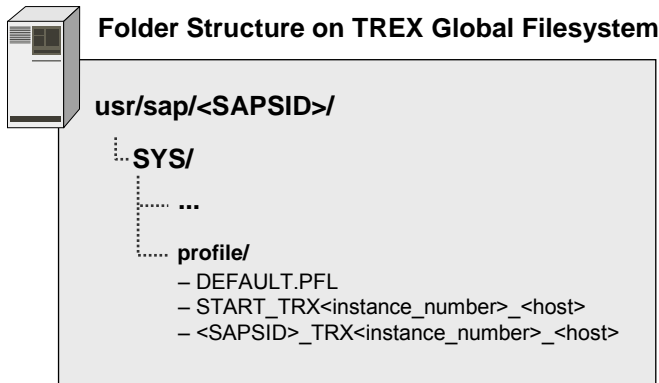


3. Installing a Global File System (installing a global file system only)

In this scenario, you install a global file system only, without a TREX instance on you local host. You can install the global file system on any host, as long as you ensure that the global file system is highly available and accessible for all TREX instances at all times.

Directory structure and files

If you install only a global file system on a host, the installation creates directory structures on Windows as illustrated in the graphic below:



SAP System Profiles for the Global File System

During installation of a TREX dialog instance, you specify the central directory for the SAP system profiles. In this directory, the system automatically generates start profiles and instance profiles for the TREX instances installed. System profiles contain information about the configuration of individual SAP instances. A start profile determines which processes are to be started or stopped. (See [Starting and Stopping TREX \[Extern\]](#).)

Depending on the entries made during installation, the system creates the following profiles:

- System profile `DEFAULT.PFL`

The system profile contains settings and information that are important throughout the system. The system profile exists once only in the global file system.

- Start profile `START_TRX<instance_number>_<host>`

This is the start profile for a TREX instance. It specifies the TREX instance number and the host name on which the TREX instance runs.

- Instance profile `<SAPSID>_TRX<instance_number>_<host>`

The instance profile contains specific information about the runtime environment for a TREX instance.



Information on Installing Multiple TREX Instances

You can install several independent TREX instances on the same host. This is useful for test purposes. Note the following:

During the setup

- Give each instance a different instance number.
- Each instance must be installed in its own directory. The TREX setup program ensures this by including the instance number in the directory name.
- Each instance must use a different port. The TREX setup program suggests suitable ports so that they do not clash with other TREX instances on the same host.

After the installation (HTTP connection)

If you are installing TREX on Windows, you must make sure that the Web pages of the individual instances run independently of one another. The following configuration is required for this:

- Microsoft IIS 5.x: For each Web site, the *Application Protection* must be set to *High (Isolated)* in the corresponding virtual directory.
- Microsoft IIS 6.0: There must be a separate Web service extension for each instance. Each TREX Web site must also use its own application pool.

The configuration steps are described in this guide.



Preparing the System for SAPinst GUI

Use

The installation tool SAPinst uses the Java based graphical user interface SAPinst GUI. Preparing the system for SAPinst GUI consists of checking your Java Runtime Environment (JRE), because the JRE could not be integrated into the SAPinst GUI executable due to licensing issues.



You can run the SAPinst GUI on the installation host or, if required, you can control an installation using a standalone SAPinst GUI on a separate Windows or UNIX host.

This standalone SAPinst GUI enables you to perform the installation on a remote host while monitoring it with the SAPinst GUI from a local host. If you want to do that, see [Controlling a SAPinst Installation from a Remote Machine \[Page 61\]](#).

Procedure

You have to check the existence of a released Java Runtime Environment (JRE) on the host where SAPinst GUI should run. JRE is not part of the SAP shipment. If necessary you need to download and install the required version.

1. Check the JRE versions that are released for SAP systems on SAP Service Marketplace at: service.sap.com/pam → *SAP NetWeaver* → *SAP NetWeaver 2004s* → *JSE Platforms*
2. Make sure a valid JRE version is installed, as follows:

- If JRE is not already installed:

Since JRE is not part of the SAP shipment, you need to download and install it. JRE is part of JDK (Java Development Kit).



For additional information on the recommended JRE version, see SAP Note 709140.

- If JRE is already installed:

Check the installed version of JRE by entering: `java -version`



SAPinst checks environment variable `SAPINST_JRE_HOME` for a valid Java runtime environment. If `SAPINST_JRE_HOME` is not found, SAPinst also checks `JAVA_HOME`.

Platform	Required JRE for the SAPinst GUI
All platforms	The required JRE is 1.4.2 or higher.



Checking Disk Space

Use

SAPinst creates the installation directory for the TREX software in the following directory:

- Windows – <disk_drive>:\usr\sap\<SAPSID>
- UNIX – /usr/sap/<sapsid>

Before the installation starts, make sure that there is enough disk space in this directory for the TREX software. For information on the required disk space, see [Hardware and Software Requirements \[Extern\]](#).

Procedure on UNIX

Starting Point	Procedure
The directory /usr does not yet exist.	For the directory /usr, select a partition that has sufficient disk space for the TREX software and other SAP software if necessary.
The directory /usr exists, but the directory /usr/sap does not.	Choose one of the following options: <ul style="list-style-type: none"> • Create a new partition with sufficient disk space for the directory sap. Insert the directory sap into the directory /usr. • Create the directory sap in a file system that has sufficient disk space. Generate a symbolic link to the directory sap in the directory /usr.
The directory /usr/sap already exists.	Go to the directory /usr/sap and check the amount of free disk space by executing the following command. <pre>df -k .</pre> If there is not enough disk space, proceed as follows: <ol style="list-style-type: none"> 1. Create the installation directory in a file system that has sufficient disk space. You must assign the installation directory the name <code>trx<instance_number></code>. <instance_number> must match the instance number that you specified during the installation. 2. Generate a symbolic link to the installation directory in the directory /usr/sap.

Procedure on Windows

On Windows you can choose the target drive during the installation. Use the Windows Explorer to check whether there is sufficient disk space on the target drive.



Installation

Purpose

The sections that follow describe how to install TREX with SAPinst and tell you which entries are required during the setup.



Installing with SAPinst

Use

This following sections tell you how to run SAPinst to install TREX on the released platforms. It describes an installation where SAPinst GUI and SAPinst server are running on the same host. If you want to perform a remote installation, that is, SAPinst GUI is running on another host, see [Controlling a SAPinst Installation from a Remote Machine \[Page 61\]](#).

Note the following about SAPinst:

- When you start SAPinst, SAPinst GUI and the GUI server also start. SAPinst GUI connects via a secure SSL connection to the GUI server and the GUI server connects to SAPinst.
- SAPinst normally creates the installation directory `sapinst_instdir` where it keeps its log files, and which is located directly below the Program Files directory. If SAPinst is not able to create `sapinst_instdir` directly below the Program Files directory, SAPinst tries to create `sapinst_instdir` in the directory defined by the environment variable `TEMP`.
- **Windows:** SAPinst creates a subdirectory for each installation service, named `<sapinst_instdir>\<installation_service>` which is located below `%ProgramFiles%\sapinst_instdir`. The exact name of the subdirectory depends on the installation service chosen by you.
- **UNIX:** SAPinst normally creates the installation directory `sapinst_instdir` directly below the temporary directory. SAPinst finds the temporary directory by checking the value of the environment variables `TEMP`, `TMP`, or `TMPDIR`. If no value is set for these variables, SAPinst uses `/tmp` as default installation directory.
- The SAPinst Self-Extractor extracts the SAPinst executables to the temporary directory. These executables are deleted again after SAPinst has stopped running.
- The SAPinst Self-Extractor extracts the executables to a temporary directory (`TEMP`, `TMP`, `TMPDIR`, or `SystemRoot`). These executables are deleted after SAPinst has stopped running.
- Directories with the name `sapinst_exe.xxxxxxx.xxxx` sometimes remain in the temporary directory. You can safely delete them.
- In the temporary directory you can also find the SAPinst Self-Extractor log file `dev_selfex.out`, which might be useful if an error occurs.



If SAPinst cannot find a temporary directory, the installation terminates with the error `FCO-00058`.

- **Windows:** If you want to terminate SAPinst and the SAPinst Self-Extractor, do one of the following:
 - Right-click the icon for the SAPinst output window located in the Windows tray and choose *Exit*.
 - Click the icon for the SAPinst output window located in the Windows tray and choose *File* → *Exit*.
- **UNIX:** If required, you can terminate SAPinst and the SAPinst Self-Extractor by pressing Ctrl+C.



Before you start the installation with the command `sapinst` make sure that all mount-points (UNIX) or network drives (Windows) are accessible. If this does not work you may have to temporarily unmount the unaccessible mount points or mapped network drives.

Procedure

You now can start the installation with SAPinst:

- [Installing with SAPinst on UNIX \[Page 31\]](#)
- [Installing with SAPinst on Windows \[Page 33\]](#)



Installing with SAPinst on UNIX

This procedure tells you how to run SAPinst to install TREX on UNIX.

Prerequisites

- Make sure that your operating system does not delete the contents of the temporary directory `/tmp` or the contents of the directories to which the variables `TEMP`, `TMP`, or `TMPDIR` point, for example by using a crontab entry.



SAPinst normally creates the installation directory `sapinst_instdir` directly below the temporary directory. SAPinst finds the temporary directory by checking the value of the environment variables `TEMP`, `TMP`, or `TMPDIR`. If no value is set for these variables, SAPinst uses `/tmp` as default directory.

The SAPinst Self-Extractor extracts the SAPinst executables to the temporary directory, `TEMP`, `TMP`, `TMPDIR` or `/tmp`. These executables are deleted again after SAPinst has stopped running.



If SAPinst cannot find a temporary directory, the installation terminates with the error FCO-00058.

- Make sure that you have at least 60 MB of free space in the installation directory for each Java installation service. In addition, you need 200MB free space for the SAPinst executables. If you cannot provide 200 MB free space in the temporary directory, you can set one of the environment variables `TEMP`, `TMP`, or `TMPDIR` to another directory with 200 MB free space for the SAPinst executables.



Each SAP instance requires a separate installation directory.

- Make sure that your `SAPINST_JRE_HOME` environment variable is set to a valid Java Runtime Environment (JRE).



If you have more than one Java Virtual Machine (JVM) installed on your system (for example, you have two JREs with different versions installed), make sure that the `SAPINST_JRE_HOME` environment variable <UNIX: for user root> is set to the valid <JAVA_HOME> directory.

- Make sure that your `DISPLAY` environment variable is set to `<host_name>:0.0`, where <host_name> is the host on which the SAPinst GUI will be displayed.
- If there are errors with SAPinst, you can find the Self-Extractor log file `dev_selfex.out` in the temporary directory.
- If required, delete any directories with the name `sapinst_exe.xxxxxx.xxxx` after SAPinst has finished. Sometimes these remain in the temporary directory.



We recommend that you keep all installation directories until you are fully satisfied that the system is completely and correctly installed.

Procedure

1. Log on to the installation host as **root**.
2. Mount the SAP Installation master DVD with the installation files.



Mount the DVD locally. We do not recommend using Network File System (NFS).

3. Enter the following commands to run the command `sapinst` from the mounted DVD:

```
cd <DVD_DIR>/IM<x>_<OS>/SAPINST/UNIX/<OS>/
chmod 777./sapinst
```

SAPinst creates the directory `sapinst_inst_dir` – which is the current working directory for your installation below the temporary directory of your operating system.



SAPinst uses the port 21212 during the installation for communication with the SAPinst GUI. If this port is already used by another service you must add the parameter `SAPINST_DIALOG_PORT=<free_port_number>` to the relevant `sapinst` command above. For example: `./sapinst SAPINST_DIALOG_PORT=<free_port_number>`

SAPinst GUI normally starts automatically by displaying the *Welcome* screen. However, if there is only one component to install, SAPinst directly displays the first input dialog without presenting the *Welcome* screen.

4. In the screen *Welcome to SAP Installation Master*, choose *Search and Classification (TREX)*.
5. Follow the instructions on your screen.

The necessary input parameters are listed in the following sections:

- [Installing a Central TREX Instance \[Page 35\]](#)
- [Installing a TREX Dialog Instance \[Page 39\]](#)
- [Installing a Global File System \[Page 43\]](#).

6. After you have maintained all input parameters, SAPinst starts the installation and displays installation progress during the processing phase. If the installation was successful, the screen *Finished installation* is displayed.

If errors occur during the installation, see [Troubleshooting \[Extern\]](#).



Installing with SAPinst on Windows

This procedure tells you how to run SAPinst to install TREX on Windows.

Prerequisites

You are logged on as user with the required rights and privileges that authorize you to install the SAPinst tool and the SAP system. For more information, see Granting User Rights for the Installation.

- Each SAP instance requires a separate installation directory.



We recommend that you keep all installation directories until the system is completely and correctly installed.

- **ABAP:** You need at least 50 MB of free space in the installation directory for each ABAP installation service. In addition, you need 60-200 MB free space for the SAPinst executables.
- **Java:** You need at least 130 MB of free space in the installation directory for each Java installation service. In addition, you need 60-200 MB free space for the SAPinst executables.

Procedure

1. Log on to the installation host as a user with **administrator rights**.
2. Insert the SAP installation master DVD with the installation files in your DVD drive.
3. Double click `sapinst.exe` from `<DVD_DRIVE>:\IM<x>_<OS>\SAPinst\NT\<platform>`.

SAPinst creates the directory `sapinst_instdir` – which is the current working directory for your installation – and SAPinst GUI starts automatically by displaying the *Welcome* screen.



SAPinst uses the port 21212 during the installation for communication with the SAPinst GUI. If this port is already used by another service you must add the parameter `SAPINST_DIALOG_PORT=<free_port_number>` to the relevant `sapinst` command above. For example: `./sapinst SAPINST_DIALOG_PORT=<free_port_number>`.

SAPinst GUI normally starts automatically by displaying the *Welcome* screen. However, if there is only one component to install, SAPinst directly displays the first input dialog without presenting the *Welcome* screen.

4. In the screen *Welcome to SAP installation master*, choose *Search and Classification (TREX)*.

SAPinst creates a subdirectory for the chosen installation service below the installation directory `sapinst_instdir`.

5. Follow the instructions on your screen.

The necessary input parameters are listed in the following sections:

- [Installing a Central TREX Instance \[Page 35\]](#)
- [Installing a TREX Dialog Instance \[Page 39\]](#)
- [Installing a Global File System \[Page 43\]](#)

After you have entered all required input parameters, SAPInst starts the installation and displays installation progress during the processing phase. If the installation was successful, the screen *Finished installation* is displayed.


If errors occur during the installation, see [Troubleshooting \[Extern\]](#).



Handling SAPInst GUI

Use

The following push buttons are available on the different SAPInst GUI dialogs (input screens, installation progress screen, message box):

Push Button/ Function Key	Meaning
<i>F1</i>	Displays detailed information about each input parameter. The new field help replaces the former "What's this"-help on the SAPInst screens and the former input parameter tables in the installation guide.
<i>Exit</i>	<p> Cancels the installation with the following options:</p> <ul style="list-style-type: none"> • Stop Stops the installation without further changing the installation files. You can continue the installation later from this point, when restarting SAPInst. • Continue Continues the installation.
<i>Log Off</i>	<p>Stops the SAPInst GUI, but SAPInst and the GUI server continue running.</p>  <p>If for some reason you need to log off during the installation from the host where you control the installation with SAPInst GUI, the installation continues while you are logged off. You can later reconnect to the same SAPInst installation from the same or another host. For more information,</p> <p>For more information on running SAPInst GUI standalone, see Starting SAPInst GUI Standalone [Page 61]</p>
<i>Retry</i>	Performs the installation step again (if an error has occurred).
<i>Stop</i>	Stops the installation without further changing the installation files. You can continue the installation later from this point.
<i>Continue</i>	Continues with the option you have chosen before.





Installing a Central TREX Instance



The table below shows the names of the windows that are displayed during the installation of a central TREX instance (global file system and TREX instance) and the entries that you need to make.









For more information about the concept of the central TREX instance, see [Global File System and TREX Instances \[Page 23\]](#).

After SAPinst starts, the screen *Welcome to SAP installation master* appears.

Window	Input
<i>Welcome to SAP Installation Master</i>	<ol style="list-style-type: none"> In the folder hierarchy, choose <i>SAP NetWeaver 2004s</i> → <i>Stand-Alone Engines/Optional Stand-Alone Units</i> → <i>Search and Classification (TREX)</i> → <i>TREX Central Instance</i>. Choose <i>Next</i>. <p>The screen <i>DVD/CD Browser > Software Package Request</i> appears.</p>
<i>DVD/CD Browser > Software Package Request</i>	<ol style="list-style-type: none"> Insert the CD containing the TREX installation files (Windows) or mount the CD (UNIX). <i>Package Location</i> Specify the path to the CD containing the TREX installation files. <div style="text-align: center;">  </div> <p>During the TREX installation, which you perform as the user <code>root</code> (UNIX) or as a user with administration rights (Windows), the operating system user <code><SAPSID>adm</code> is created. For all operating systems, make sure that the user <code><SAPSID>adm</code> has at least read-access to the TREX installation CD. Otherwise, a Python error message can occur during installation.</p> <p>If the user <code><SAPSID>adm</code> does not have at least read-access for the CD containing the TREX installation files, you can copy the CD to your local hard-drive. To do this, specify in <code>CopyPackageTo</code> the path to the directory to which you want to copy the files on the TREX installation CD.</p> <ol style="list-style-type: none"> Choose <i>Next</i>.
<i>TREX > Installation</i> <i>Confirm the installation of TREX Search and Classification</i>	Choose <i>Next</i> .
<i>SAP System > General Parameters</i>	<p><i>SAP System Parameters</i> → <i>SAP System ID (SAPSID)</i></p> <p>Enter an SAP system ID <code><SAPSID></code>.</p> <p>The system ID consists of three characters and must begin with a capital letter, after that it can contain numbers.</p> <div style="text-align: center;">  </div>

	<p>When you choose a system ID <SAPSID> for your TREX landscape check what system IDs are already in use by other SAP applications on the same host where TREX will be installed. Do not use the same system ID <SAPSID> of an existing SAP system landscape for your TREX installation and landscape. Otherwise an error message will occur.</p>
<p><i>SAP System > Windows Domain</i></p>	<ol style="list-style-type: none"> 1. In <i>SAP System User Domain → Domain Model</i>, enter the Windows domain in which the user accounts for the SAP system have been created: <ul style="list-style-type: none"> ○ <i>Local Installation:</i> You choose this setting if you are installing the central TREX instance locally on a host. ○ <i>Installation in Domain for Current User</i> You choose this setting if you are installing the central TREX instance in the Windows domain of the current user. ○ <i>Installation in Different Domain</i> You choose this setting if you are installing the central TREX instance in a different Windows domain to that of the current user.  <p>You must note that, in both cases involving installation in a Windows domain, you must have domain administrator rights in order to be able to create the required operating system users.</p> 2. Choose <i>Next</i>.  This window and these entries are not required on UNIX.
<p><i>SAP System > OS User Passwords</i></p>	<ol style="list-style-type: none"> 1. Enter passwords for the operating system users: <ol style="list-style-type: none"> a. <i>SAP System Administrator → SAP System Administrator Password</i> Here you enter a password for the operating system user <sapsid>adm that you log on with to administrate TREX. b. <i>SAP System Administrator → Confirm</i> Confirm the password you entered. c. <i>SAP System Service User → SAP System Service User Password</i> Here you enter a password for the operating system user SAPService<SAPSID> under which the TREX processes run. d. <i>SAP System Service User → Confirm</i> Confirm the password you entered. 2. Choose <i>Next</i>.

<p><i>TREX > Instance</i></p> <p><i>Choose a new TREX instance to install or an existing TREX instance to upgrade</i></p>	<ul style="list-style-type: none"> • <i>TREX Installation Mode</i> → <i>SAP System ID (SAPSID)</i> The SAP system ID <SAPSID> that you created previously is displayed here. • <i>TREX Installation Mode</i> → <i>Install a new TREX instance</i> You cannot change this option because you are installing a new TREX instance and not updating an existing instance. <p>1. <i>New TREX Instance</i> → <i>Instance Number</i> Enter an instance number for the TREX instance that you are installing. Note the following:</p> <ul style="list-style-type: none"> ○ You can choose any number between 00 and 98. ○ The instance number must be unique on the host. If several instances of a piece of SAP software are running on the same host (TREX instances or instances of other SAP systems) they must have different instance numbers. If instances have already been installed, the system suggests the next available number. <p>2. Only Windows: Choose the drive on which the TREX software is to be installed.</p> <p>SAPinst checks whether the installation directory already exists. If not, it creates it. The directory is:</p> <ul style="list-style-type: none"> • On UNIX /usr/sap/<SAPSID>/trx<instance_number> • On Windows <disk_drive>:\usr\sap\<SAPSID>\TRX<instance_number> <p>The path to the directory is fixed and cannot be changed (apart from the Windows disk drive).</p>  <p>The directory should not be available before the installation unless you explicitly created it for space reasons previously (see Checking Disk Space [Page 29]).</p> <p>This allows you to ensure that the directory does not contain any data that doesn't belong to TREX, which would then also be deleted if TREX were uninstalled.</p>
<p><i>TREX > Instance Details</i></p> <p><i>Enter values to configure settings for the following TREX installation components</i></p>	<p>You can make the following setting for the TREX installation:</p> <ul style="list-style-type: none"> • <i>Install HTTP Server</i> If the application communicates with TREX using an HTTP connection, select the field <i>Install HTTP Server</i>.
<p><i>TREX > Proxy Settings</i></p> <p><i>Enter the proxy configuration settings</i></p>	<p>If there is a proxy server between the TREX servers and the documents to be indexed, specify the proxy server and define exclusion rules if necessary.</p>  <p>You want to index the following:</p> <ul style="list-style-type: none"> ▪ Documents on internal servers that can be accessed without a proxy server. ▪ Web pages on external servers that can only be

	<p>accessed using a proxy server.</p> <p>In this case, specify the proxy server. Since the proxy server should not be used for internal addresses, define exclusion rules for internal addresses.</p> <ul style="list-style-type: none"> • <i>Proxy Server</i> – host name and domain of the proxy server Example: proxy.mylocation.mycompany.com • <i>Proxy Server Port</i> – port of the proxy server Example: 8080 • <i>Proxy User</i> – user name needed to access the proxy server • <i>Proxy User Password</i> – password defined for the user • <i>Proxy Exclusions</i> – exclusion rules. These rules define when the proxy server is not to be used. Separate multiple entries using a semicolon.  <p>Examples of exclusion rules:</p> <ul style="list-style-type: none"> ▪ Do not use the proxy server to get URLs that end in <code>mycompany.com</code>: mycompany.com ▪ Do not use the proxy server to get IP addresses that start with <code>10.:</code> <code>10.</code>  <p>Do not use asterisks as placeholders.</p>
<p><i>TREX > Languages for Document Analysis</i> <i>Enter the document analysis languages</i></p>	<p>TREX supports the following languages for indexing and searching:</p> <ul style="list-style-type: none"> • European languages – English, German, French, Spanish, Portuguese, Dutch, Swedish, Finnish, Danish, Bokmal and Nynorsk (the two Norwegian languages) and Italian. • Asian languages – Japanese, Korean, Simplified Chinese, and Traditional Chinese. <p>If the application does not transmit the document language to TREX, TREX has to carry out a language recognition process before indexing. You can select the languages that you want TREX to recognize.</p>  <p>Only select the languages that are relevant. This optimizes performance during the language recognition process, and therefore during the search and indexing process. The language recognition process gives better results if as few languages as possible are used.</p>  <p>However, TREX can also index documents whose language is not specified here. TREX then inserts the documents in question into the index for the default language (normally English). For example, if you select English and German and a document in Spanish is then indexed, the document is inserted into the English index.</p>


	<p>This affects the documents in question in the following manner:</p> <ul style="list-style-type: none"> ▪ A linguistic search is not possible. ▪ TREX may extract keywords (document features) that are not characteristic of the document.
<i>Start Execution</i>	<p>SAPinst displays the chosen settings.</p> <ul style="list-style-type: none"> • You can check the selected settings and choose <i>Edit</i> to change them if necessary. • To start the installation, choose <i>Next</i>.




Installing a TREX Dialog Instance


The table below shows the names of the windows that are displayed during the installation of a TREX dialog instance (only the TREX instance) and the entries that you need to make.








For more information about the concept of the TREX dialog instance, see [Global File System and TREX Instances \[Page 23\]](#).

Window	Input
<i>Welcome to SAP Installation Master</i>	<ol style="list-style-type: none"> 1. In the folder hierarchy, choose <i>SAP NetWeaver 2004s</i> → <i>Stand-Alone Engines/Optional Stand-Alone Units</i> → <i>Search and Classification (TREX)</i> → <i>TREX Dialog Instance</i>. 2. Choose <i>Next</i>. <p>The screen <i>DVD/CD Browser > Software Package Request</i> appears.</p>
<i>DVD/CD Browser > Software Package Request</i>	<ol style="list-style-type: none"> 1. Insert the CD containing the TREX installation files (Windows) or mount the CD (UNIX). 2. <i>Package Location</i> Specify the path to the CD containing the TREX installation files. <p></p> <p>During the TREX installation, which you perform as the user <code>root</code> (UNIX) or as a user with administration rights (Windows), the operating system user <code><SAPSID>adm</code> is created. For all operating systems, make sure that the user <code><SAPSID>adm</code> has at least read-access to the TREX installation CD. Otherwise, a Python error message can occur during installation.</p> <p>If the user <code><SAPSID>adm</code> does not have at least read-access for the CD containing the TREX installation files, you can copy the CD to your local hard-drive. To do this, specify in <code>CopyPackageTo</code> the path to the directory to which you want to copy the files on the TREX installation CD.</p> <ol style="list-style-type: none"> 3. Choose <i>Next</i>.
<i>TREX > Installation</i>	Choose <i>Next</i> .

<p><i>Confirm the installation of TREX Search and Classification</i></p>	
<p><i>SAP System > General Parameters</i></p>	<ol style="list-style-type: none"> In <i>SAP System Parameters</i> → <i>Profile Directory</i>, enter the path to the directory in which the SAP system profiles are stored: Windows: \\<SAPGLOBALHOST>\sapmnt\<SAPSID>\SYS\profile UNIX: /<SAP System Mount Directory>/<SAPSID>/profile In the default scenario, the SAP system profiles are located on the host on which the central TREX instance has been installed. You can choose <i>Browse</i> to search for the directory.  The global file system must be highly available. All instances of a TREX system must have permanent access to it. You guarantee this by inserting the profile directory as a network drive (Windows) or by mount (UNIX): Choose <i>Next</i>.
<p><i>SAP System > Windows Domain</i></p>	<ol style="list-style-type: none"> In <i>SAP System User Domain</i> → <i>Domain Model</i>, enter the Windows domain in which the user accounts have been created: <ul style="list-style-type: none"> <i>Local Installation:</i> You choose this setting if you are installing the TREX dialog instance locally on a host. <i>Installation in Domain for Current User</i> You choose this setting if you are installing the TREX dialog instance in the Windows domain of the current user. <i>Installation in Different Domain</i> You choose this setting if you are installing the TREX dialog instance in a different Windows domain to that of the current user.  You must note that, in both cases involving installation in a Windows domain, you must have domain administrator rights in order to be able to create the required operating system users. Choose <i>Next</i>.  This window and these entries are not required on UNIX.
<p><i>SAP System > OS User Passwords</i></p>	<ol style="list-style-type: none"> Enter the password for the operating system users that were defined during installation of the global file system: <ul style="list-style-type: none"> <i>SAP System Administrator</i> → <i>Password of SAP System Administrator</i> Here you enter the password for the operating system user <sapsid>adm that you log on with to administrate TREX. <i>SAP System Service User</i> → <i>Password of SAP System Service User</i>

	<p>Here you enter the password for the operating system user <code>SAPService<SAPSID></code> under which the TREX processes run.</p> <p>2. Choose <i>Next</i>.</p>
<p><i>TREX > Instance</i></p> <p><i>Choose a new TREX instance to install or an existing TREX instance to upgrade</i></p>	<ul style="list-style-type: none"> • <i>TREX Installation Mode</i> → <i>SAP System ID (SAPSID)</i> <p>The SAP system ID <code><SAPSID></code> is displayed here. The system ID was previously defined during one of the following steps:</p> <ul style="list-style-type: none"> ○ Configuration of a TREX system landscape with preceding installation of a central TREX instance and the associated global file system. The system ID defined during installation of the central TREX instance is then valid for all TREX dialog instances that are added to the TREX system landscape. ○ Installation of a global file system only on a separate host <ul style="list-style-type: none"> • <i>Install a new TREX instance</i> <p>You cannot change this option because you are installing a new TREX instance and not updating an existing instance.</p> <p>1. <i>New TREX Instance</i> → <i>Instance Number</i></p> <p>Enter an instance number for the TREX instance that you are installing. Note the following:</p> <ul style="list-style-type: none"> ○ You can choose any number between 00 and 98. ○ The instance number must be unique on the host. If several instances of a piece of SAP software are running on the same host (TREX instances or instances of other SAP systems) they must have different instance numbers. If instances have already been installed, the system suggests the next available number. <p>2. Only Windows: Choose the drive on which the TREX software is to be installed.</p> <p>SAPinst checks whether the installation directory already exists. If not, it creates it. The directory is:</p> <ul style="list-style-type: none"> • On UNIX <code>/usr/sap/<SAPSID>/trx<instance_number></code> • On Windows <code><disk_drive>:\usr\sap\<SAPSID>\TRX<instance_number></code> <p>The path to the directory is fixed and cannot be changed (apart from the Windows disk drive).</p> <div style="text-align: center;">  </div> <p>The directory should not be available before the installation unless you explicitly created it for space reasons previously (see Checking Disk Space [Page 29]).</p> <p>This allows you to ensure that the directory does not contain any data that doesn't belong to TREX, which would then also be deleted if TREX were uninstalled.</p>
<p><i>TREX > Instance Details</i></p> <p><i>Enter values to</i></p>	<p>You can make the following settings for the TREX installation:</p> <ul style="list-style-type: none"> • <i>Install HTTP Server</i> <p>If the application communicates with TREX using an HTTP</p>

<p><i>configure settings for the following TREX installation components</i></p>	<p>connection, select the field <i>Install HTTP Server</i>.</p>
<p><i>TREX > Proxy Settings</i> <i>Enter the proxy configuration settings</i></p>	<p>If there is a proxy server between the TREX servers and the documents to be indexed, specify the proxy server and define exclusion rules if necessary.</p> <p></p> <p>You want to index the following:</p> <ul style="list-style-type: none"> ▪ Documents on internal servers that can be accessed without a proxy server. ▪ Web pages on external servers that can only be accessed using a proxy server. <p>In this case, specify the proxy server. Since the proxy server should not be used for internal addresses, define exclusion rules for internal addresses.</p> <ul style="list-style-type: none"> • <i>Proxy Server</i> – host name and domain of the proxy server Example: proxy.mylocation.mycompany.com • <i>Proxy Server Port</i> – port of the proxy server Example: 8080 • <i>Proxy User</i> – user name needed to access the proxy server • <i>Proxy User Password</i> – password defined for the user • <i>Proxy Exclusions</i> – exclusion rules. These rules define when the proxy server is not to be used. Separate multiple entries using a semicolon. <p></p> <p>Examples of exclusion rules:</p> <ul style="list-style-type: none"> ▪ Do not use the proxy server to get URLs that end in mycompany.com: mycompany.com ▪ Do not use the proxy server to get IP addresses that start with 10: 10. <p></p> <p>Do not use asterisks as placeholders.</p>
<p><i>TREX > Languages for Document Analysis</i> <i>Enter the document analysis languages</i></p>	<p>TREX supports the following languages for indexing and searching:</p> <ul style="list-style-type: none"> • European languages – English, German, French, Spanish, Portuguese, Dutch, Swedish, Finnish, Danish, Bokmal and Nynorsk (the two Norwegian languages) and Italian. • Asian languages – Japanese, Korean, Simplified Chinese, and Traditional Chinese. <p>If the application does not transmit the document language to TREX, TREX has to carry out a language recognition process before indexing. You can select the languages that you want TREX to recognize.</p>

	 <p>Only select the languages that are relevant. This optimizes performance during the language recognition process, and therefore during the search and indexing process. The language recognition process gives better results if as few languages as possible are used.</p>  <p>However, TREX can also index documents whose language is not specified here. TREX then inserts the documents in question into the index for the default language (normally English). For example, if you select English and German and a document in Spanish is then indexed, the document is inserted into the English index.</p> <p>This affects the documents in question in the following manner:</p> <ul style="list-style-type: none"> ▪ A linguistic search is not possible. ▪ TREX may extract keywords (document features) that are not characteristic of the document.
<p><i>Start Execution</i></p>	<p>SAPinst displays the chosen settings.</p> <ul style="list-style-type: none"> • You can check the selected settings and choose <i>Edit</i> to change them if necessary. • To start the installation, choose <i>Next</i>.





Installing a Global File System

The table below shows the names of the windows that are displayed during the installation of a global file system and the entries that you need to make.



For more information about the concept of the global file system, see [Global File System and TREX Instances \[Page 23\]](#).

Window	Input
<p><i>Welcome to SAP Installation Master</i></p>	<ol style="list-style-type: none"> 1. In the folder hierarchy, choose <i>SAP NetWeaver 2004s → Stand-Alone Engines/Optional Stand-Alone Units → Search and Classification (TREX) → TREX Global File System Preparation</i>. You use this item to install a global file system on a local host. 2. Choose <i>Next</i>. The screen <i>DVD/CD Browser > Software Package Request</i> appears.
<p><i>DVD/CD Browser > Software Package Request</i></p>	<ol style="list-style-type: none"> 1. Insert the CD containing the TREX installation files (Windows) or mount the CD (UNIX). 2. <i>Package Location</i> Specify the path to the CD containing the TREX installation files.

	 <p>During the TREX installation, which you perform as the user <code>root</code> (UNIX) or as a user with administration rights (Windows), the operating system user <code><SAPSID>adm</code> is created. For all operating systems, make sure that the user <code><SAPSID>adm</code> has at least read-access to the TREX installation CD. Otherwise, a Python error message can occur during installation.</p> <p>If the user <code><SAPSID>adm</code> does not have at least read-access for the CD containing the TREX installation files, you can copy the CD to your local hard-drive. To do this, specify in <code>CopyPackageTo</code> the path to the directory to which you want to copy the files on the TREX installation CD.</p> <p>3. Choose <i>Next</i>.</p>
<p>SAP System > General Parameters</p>	<p>SAP System Parameters → SAP System ID (SAPSID)</p> <p>Enter an SAP system ID <code><SAPSID></code>.</p> <p>The system ID consists of three characters and must begin with a capital letter, after that it can contain numbers.</p>  <p>When you choose a system ID <code><SAPSID></code> for your TREX landscape check what system IDs are already in use by other SAP applications on the same host where TREX will be installed. Do not use the same system ID <code><SAPSID></code> of an existing SAP system landscape for your TREX installation and landscape. Otherwise an error message will occur.</p>
<p>SAP System > Windows Domain</p>	<p>1. In <i>SAP System User Domain</i> → <i>Domain Model</i>, enter the Windows domain in which the user accounts have been created:</p> <ul style="list-style-type: none"> ○ <i>Local Installation:</i> You choose this setting if you are installing the global file system locally on a host. ○ <i>Installation in Domain for Current User</i> You choose this setting if you are installing the global file system in the Windows domain of the current user. ○ <i>Installation in Different Domain</i> You choose this setting if you are installing the global file system in a different Windows domain to that of the current user.  <p>You must note that, in both cases involving installation in a Windows domain, you must have domain administrator rights in order to be able to create the required operating system users.</p> <p>2. Choose <i>Next</i>.</p>  <p>This window and these entries are not required on UNIX.</p>

<p><i>SAP System > OS User Passwords</i></p>	<ol style="list-style-type: none"> 1. Enter passwords for the operating system users: <ol style="list-style-type: none"> a. <i>SAP System Administrator</i> → <i>SAP System Administrator Password</i> Here you enter a password for the operating system user <sapsid>adm that you log on with to administrate TREX. b. <i>SAP System Administrator</i> → <i>Confirm</i> Confirm the password you entered. c. <i>SAP System Service User</i> → <i>SAP System Service User Password</i> Here you enter a password for the operating system user SAPService<SAPSID> under which the TREX processes run. d. <i>SAP System Service User</i> → <i>Confirm</i> Confirm the password you entered. 2. Choose <i>Next</i>.
<p><i>Start Execution</i></p>	<p>SAPinst displays the chosen settings.</p> <ul style="list-style-type: none"> • You can check the selected settings and choose <i>Edit</i> to change them if necessary. • To start the installation, choose <i>Next</i>.



Post-Installation Configuration

Purpose

After the *Search and Classification (TREX)* function has been installed, you perform a number of technical configuration steps. The sections below describe:

- General configuration steps that you carry out for your operating platform.
- Configuration steps that you only carry out if the application in question communicates with TREX using an HTTP or an RFC connection.



Server Side

Purpose

The following sections describe the configuration steps that you have to carry out on the server side.



Configuring TREX for the System Landscape Directory (SLD)

Use

A modern computing environment consists of a number of hardware and software components that depend on each other with regard to installation, software updates, and demands on interfaces. The SAP System Landscape Directory (SLD) simplifies the administration of your system landscape.

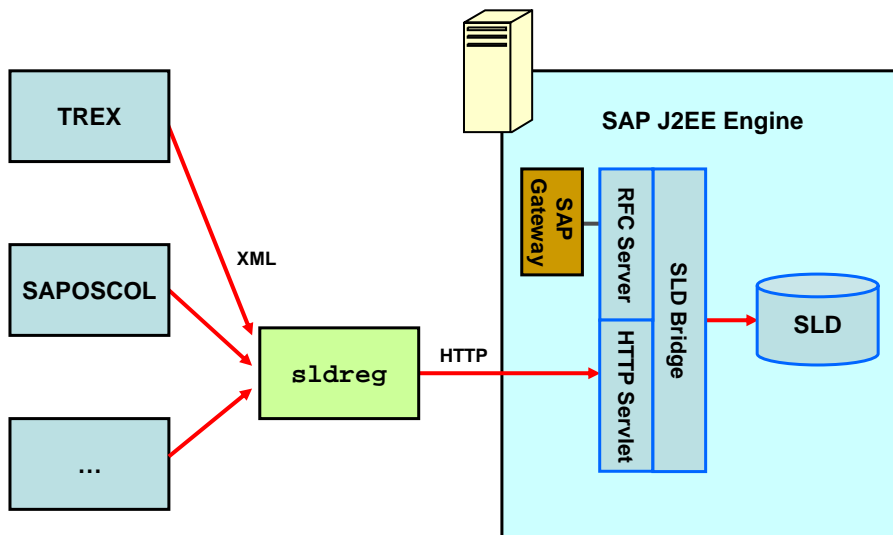
The SLD is a server application that communicates with a client application using the Hypertext Transfer Protocol (HTTP). The SLD server contains component information, a landscape description, and a name reservation, which are based on the standard Common Information Model (CIM). The CIM standard is a general schema for describing the elements in a system landscape. This standard is independent of any implementation.

The component description provides information about all available SAP software modules, as well as their combination options and dependencies. This includes version numbers, current patch level, and dependencies between landscape components.



For more information about the *SAP System Landscape Directory*, see *SAP Help Portal* help.sap.com → *Documentation* → *SAP NetWeaver* → *SAP Library* → *SAP NetWeaver* → *Application Platform* → *Java Technology in SAP Web Application Server* → *Administration Manual* → *Server Administration* → *SAP System Landscape Directory*

To supply data to the SLD that originates from a system other than a J2EE or ABAP system, the executable `sldreg` is used. The `sldreg` sends data in XML format using a predefined DTD. For this purpose it uses an HTTP connection, as shown in the figure below:



On the TREX host, there is an SLD client, which generates an XML file of this type and which registers itself with the SLD server using `sldreg`.

Prerequisites

- After the TREX installation, the SLD client and the associated executable files are located on your TREX host:
- The administrator of your SAP system landscape has fulfilled the following prerequisites:
 - The SLD server is running.
 - The administrator has generated the SLD configuration files `slddest.cfg` and `slddest.cfg.key`.



The `slddest.cfg.key` file is only available if the configuration of `sldreg` was generated using the `- usekeyfile` parameter.

For more information about configuring `sldreg`, see the *SAP Service Market Place* service.sap.com/installnw2004s and read the *Configuration of Data Suppliers* section of the *Post-Installation Guide – System Landscape Directory*.

- The user specified in the SLD configuration file `slddest.cfg` belongs to the `DataSupplierLD` user role, in order to have permission to send the files to the SLD.

Copying the SLD Configuration Files to the Global SLD Directory

To configure TREX for the *System Landscape Directory (SLD)*, you copy the SLD configuration files `slddest.cfg` and `slddest.cfg.key` (if available) to the global SLD directory on your TREX host.

This directory is called `<disk_drive>:\usr\sap\<SAPSID>\SYS\global` on Windows and `/usr/sap/<SAPSID>/SYS/global` on UNIX. In the case of a distributed TREX installation on Windows, all dialog instances use the configuration files for the central instance as `\\<host_central_instance>\sapmnt\<SAPSID>\SYS\global`

Result

By copying the files `slddest.cfg` and `slddest.cfg.key`, you have configured TREX for integration in the System Landscape Directory (SLD).

TREX checks every five minutes whether anything has changed in the TREX system landscape and reports any changes automatically to the SLD server. If nothing has changed, TREX reports every twelve hours to the SLD server. This allows you to see that this landscape is still active.

Information Transferred to the SLD Server

TREX transfers the following information to the SLD server:

Information about naming and version

- Software component version (for example, TREX 7.0)
- SAP name (for example, TREX)
- Version (for example, 7.0)

Information about the TREX servers

- Host name, on which the server is running
- Port number that the server is using

- Type of server, for example, `indexserver`
- Web server URL (instead of the port)
- RFC destination of the RFC server (instead of the port)

Information about the TREX instances on individual hosts

- System ID
- Instance number
- Installation directory
- Version information for the TREX software

Information about the TREX configuration

- Name of the TREX hosts (`Hosts`) that belong to the TREX system landscape
- TREX server roles
 - Roles of the TREX name server (`Name Server Mode`)
Possible roles are: `1st`, `2nd`, `3rd Master Name Server`, `Slave Server`
 - Use as master index server or master queue server
 - Roles of the master, slave, and backup index servers
- TREX preprocessor mode (`Preprocessor Mode`)
- Information about the TREX installation directory (`Base Path`)
- Services that have been started by the TREX daemon (`Services`)



General UNIX Configuration

Purpose

The following sections describe the steps that are necessary after an installation on UNIX.



Checking and Changing UNIX Kernel Parameters

Use

Check the following UNIX kernel parameters and modify them if necessary:

- Number of open files per process

On UNIX platforms, each process may only have a certain number of files open at once. If you create a large number of indexes and queues during routine operation, the TREX processes, in particular the queue server and index server, open a lot of files.


With many UNIX installations, the value for the maximum number of files that the processes are allowed to have open is too low. The parameter must have the following value:

Operating System	Value
AIX, HP-UX, Sun Solaris	At least 2048

Linux	At least 1024
-------	---------------

- HP-UX only:
 - Process Size

The process size should be at least 2GB.



The process size is not limited for AIX and Sun Solaris.
 - Files larger than 2 GB

Since TREX can also use files that are larger than 2GB, these must be activated at operating system level.

The TREX directory contains a test program that you can use to check whether the kernel parameters are set at a suitable level. If this is not the case, you should change the kernel parameters.

Checking Kernel Parameters

1. Log on with the user `<sapsid>adm`.
2. Go to the TREX directory.
3. Set the environment variables required by TREX:
 - Bourne shell `sh`, Bourne-again shell `bash`, Korn shell `ksh`:


```
. TREXSettings.sh
```
 - C shell `csh`:


```
source TREXSettings.csh
```
4. Test the size and number of open files per process:


```
portlibtester.x -file
```

Number of open files:

This command creates test files in the directory `/tmp/portlibtester`. The test must give a result of at least 1000 files (Linux) or 2000 files for other UNIX platforms. If this is not the case, you should change the kernel parameters.
5. Only HP-UX – Test the possible process size:


```
portlibtester.x -mem
```

This command calls upon as much main memory as possible. The test must output the value 1900 MB at least. If this is not the case, you should change the kernel parameters.

Changing Kernel Parameters

AIX

1. Log on as `root`.
2. Carry out the following steps as appropriate, depending on whether you are working with or without a Network Information System (NIS).
 - (Without NIS) Execute the following command:


```
chuser nofiles=2000 trx<instance_number>
```
 - (With NIS) Add the following entry to the file `/etc/security/limits`:


```
trx<instance_number>:
    nofiles=2000
```

- Restart the host using `reboot`.

HP-UX

Changing the process size

- Log on as root.
- Open the administration tool SAM (`usr/sbin/sam`).
- Set at least the following values in the dialog box *kernel configuration/configurable*.

Kernel Parameter	Lowest Acceptable Value
Process Size	
<code>maxdsiz</code>	0X80000000 or 2147483648
<code>maxdsiz_64bit</code>	0X80000000 or 2147483648
<code>maxtsiz</code>	0X40000000 or 1073741824
<code>maxtsiz_64bit</code>	0X40000000 or 1073741824
Number of Open Files	
<code>maxfiles</code>	2048
<code>maxfiles_lim</code>	2048
<code>nfile</code>	20000

- Restart the host using `reboot`.

Activating files larger than 2 GB

- Log on as root.
- Execute the following command:

```
fsadm -o largefiles <mount-point>
```

In doing this, you activate usage of files larger than 2 GB on a certain file system.

Linux

- Add the following line to the end of the script `<TREX_DIR>/TREXSettings.sh`:

```
ulimit -n 1024
```
- Add the following line to the end of the script `<TREX_DIR>/TREXSettings.csh`:

```
unlimit openfiles
```



`TREXSettings.csh` is not relevant for the TREX daemon. It is only relevant if you start the TREX servers manually or execute test scripts.

- If the TREX daemon is running, restart it.

Sun Solaris

- Log on as root.
- Add the following lines to the configuration file `/etc/system`.

```
set rlim_fd_max=2048
set rlim_fd_cur=2048
```
- Restart the host using `reboot`.

Result

After making the change, execute `portlibtester.x -file` again. If the number of open files is still too low, the UNIX system administrator must have restricted this parameter in another way. Contact the UNIX system administrator to remove this restriction.



Note for Linux: If you receive error messages during indexing, the value 1024 for the number of open files may not be sufficient. If this is the case, run TREX on root (you can only raise the parameter value to 2048 on root). Proceed as follows:

- Make sure that the script `<TREX_DIR>/TREXSettings.sh` contains the following line at the end:
`ulimit -n 2048`
- Make sure that the script `<TREX_DIR>/TREXSettings.csh` contains the following line at the end:
`unlimit openfiles`

`TREXSettings.csh` is not relevant for the TREX daemon. It is only relevant if you start the TREX servers manually or execute test scripts.
- Add a comment sign to the configuration file `<TREX_DIR>/<host_name>/TREXDaemon.ini` before the following lines:
`#userid = trx<instance_number>`
`#groupid = <group>`

This change causes the TREX daemon to run on root next time it starts.



Configuration of the RFC Connection

Purpose

The following sections describe the steps that you carry out if the application and TREX are communicating using an RFC connection.

Process Flow

1. [Define the SAP system users \[Page 52\]](#).
2. [Determine the SAP system connection data \[Page 52\]](#)
3. [Configure the RFC connection in the TREX admin tool \[Page 53\]](#) using the TREX admin tool (stand-alone).



For more information about how you start the TREX admin tool (stand-alone), see [Starting the TREX Admin Tool \[Page 60\]](#).

Result

For more information about the RFC connection and handling connection and configuration errors, see the documentation on the TREX admin tool (stand-alone). You can find this documentation in the SAP Library at help.sap.com/nw2004s → *SAP NetWeaver*.



Defining SAP System Users

Use

You must define a SAP system user that the TREX admin tool (stand-alone) can use to log on to the SAP system. The SAP system user is also required so that the TREX alert server has permission to be able to test and check the RFC configuration regularly. When doing this, the user can have been created in the default client or in another client.



For security reasons, SAP recommends the following:

- Create a user in the default client that is used only by the TREX admin tool.
- Use the "System" user type.
- Assign limited permissions to the user. The user only requires permission to execute function modules remotely. It does not need any further permissions.



You can also use a user that an administrator logs on with. However, SAP advises against this for security reasons.

Procedure

To determine the default client of an SAP system, use transaction RZ11. The default client is specified in the `login/system_client` parameter.

For more information about creating users in the SAP system, see the SAP Library at help.sap.com/nw2004s → *SAP NetWeaver*.



Determining the SAP System Connection Information

Use

The TREX admin tool (stand-alone) can connect to an SAP system in two ways.

- Through a specific application server of the SAP system (variant A)
- Through the message server of the SAP system (variant B)

This variant uses the load-balancing function for the SAP system. The message server assigns the request from the TREX admin tool to any application server.

Depending on the variant used, the TREX admin tool requires different connection information for the SAP system. You must determine the connection information and specify it later in the TREX admin tool.



SAP recommends using variant B. Variant A has the disadvantage that the connection does not work if the application server is not available.

Procedure

1. Open the SAP Logon.
SAP Logon is the program that you use to log on to an SAP system.
2. Note the following connection information:

Connection Setup Type	Required Connection Information
Through an application server (variant A)	<ul style="list-style-type: none"> • SAP system ID (SID) • System number • Application server host name
Through the message server (variant B)	<ul style="list-style-type: none"> • SAP system ID (SID) • Logon group, such as <code>PUBLIC</code> • Message server host name



Configuring the RFC Connection in the TREX Admin Tool

Use

You work through the steps below using the TREX admin tool (stand-alone).

Creating a Connection

1. In the *Landscape RFC* window, choose the *Create Connection* function.
2. Choose connection type A or B. Specify the connection data for the SAP system (see [Determining the Connection Data for the SAP System \[Page 52\]](#)).
3. Specify the SAP system user, the associated password, and the client that the TREX admin tool is to use to log on (see [Defining the SAP System Users \[Page 52\]](#)).



If the SAP system user in question exists in the default client, you do not need to specify the client.


Creating an RFC Destination

1. In the *Landscape RFC* window, choose the *RFC Destination (SM59)* function.
2. Enter the following parameters:

Field	Entry
<i>SAP System</i>	SAP system that you want to set up the connection to. The list contains all SAP systems that you have registered using <i>Create Connection</i> .
<i>RFC Destination</i>	Name of the RFC destination.
<i>Description</i>	Meaningful description of the purpose

The program ID determines under which name the TREX RFC server registers with the SAP gateway. The program ID must be unique for each SAP gateway. The TREX admin tool ensures this by generating the program ID.

3. Decide which SAP gateway you want to use. You have the following options:

Option	Comments
<i>Gateway local</i> (Default setting)	Use local SAP gateways for the application servers.
<i>Gateway central</i>	Use the central SAP gateway.  SAP advises against using a central SAP gateway for distributed TREX systems. The central SAP gateway is a “single point of failure.” If you choose this option, enter the following additional parameters: <ul style="list-style-type: none"> • Host name (with domain name if necessary) or the IP address of the host on which the gateway is installed. • Name of the gateway in the form <code>sapgw<instance_number></code>





SAP advises against creating the RFC destination directly in the SAP system. The name of the RFC destination and the program ID must satisfy certain naming conventions. The TREX admin tool ensures that these are fulfilled.

If you nevertheless create the RFC destination directly in the SAP system, note the following:

- SAP recommends starting the name of the RFC destination with **TREX_**.
- Choose the activation type *Registered Server Program*.
- Choose a program ID that is unique for the SAP gateway used.
- Use the *RFC Destinations* function to register the RFC destination in the TREX admin tool.




Completing the RFC Configuration

1. In the *Landscape RFC* window, choose the *Connect* function.

The TREX admin tool creates the connection to all SAP systems that are known to it. Because the RFC configuration is still incomplete, the configuration status is  yellow or  red.

2. Choose *Repair All*.

The TREX admin tool completes the RFC configuration and starts the TREX RFC server.

This can take several minutes. During this time, the configuration status remains  yellow or  red. After completion of the configuration process, the status changes to  green.



Do not choose *Repair All* several times in quick succession. This would trigger the configuration process more than once and delay it.

3. Check the progress by choosing *Refresh* to update the display.



Client Side

Purpose

The following sections describe the configuration steps that you have to carry out on the client side.



Java Application (HTTP Connection)

If a Java application communicates with TREX, you configure the TREX Java client, which is integrated as a TREX service in the J2EE engine. You also check the client-side proxy settings.



Specifying the Address of the TREX Name Server

Use

The TREX Java client needs to know the address of the TREX name server in order to communicate with the TREX servers. The following procedure describes how you determine the address and enter it into the configuration settings for the TREX Java client.



The TREX Java client communicates with the TREX server by HTTP and TCP/IP. Make sure that the TCP port that the name server uses is open.

Procedure

1. You can determine the address of the TREX name server in two ways:
 - On the TREX host, open the configuration file `<TREX_DIR>/<host_name>/sapprofile.ini`. Determine the name server port that is entered in the parameter `TREX/NameServer/Port`.
 - Start the TREX admin tool (see [Starting the TREX Admin Tool \[Page 60\]](#)) and determine the address of the name server using *Landscape Tree* → *topology* → *globals* → *all_masters*.
2. Use the user `<j2eeadm>` to log onto the host on which the J2EE Engine is running.
3. Start the *SAP J2EE Engine Visual Administrator Tool* and log on to the J2EE Engine.
For more information about using this tool, see the SAP Library at the Internet address `help.sap.com` → *Documentation* → *SAP NetWeaver*
4. Click *Cluster* and navigate to *Services* → *TREX Service*.
5. Enter the address of the TREX name server into the parameter `nameserver.address`.
`tcpip://<host_name_of_trex_host>:<name_server_port>`

You enter only the host name or the host name and the domain depending on your network environment.



`tcpip://mytrexhost:34801` OR `tcpip://mytrexhost.mydomain:34801`



The address of the TREX name server must be configured for all server processes of the cluster. Otherwise the connection between the J2EE Engine and TREX cannot be established.

6. Save your changes and confirm the restart of the service.



Checking Proxy Settings

Use

If an application is unable to communicate with TREX, it may be due to the application trying to access TREX using a proxy server. If this is the case, you have to change the configuration so that access does not take place using the proxy server.

The procedure depends on the application concerned:

- SAP Enterprise Portal 6.0 with Content Management
- Other Java applications based on J2EE 6.40

Procedure

SAP Enterprise Portal 6.0 with Content Management

Check the settings in the portal at *System Administration* → *System Configuration* → *Service Configuration* → *Applications (Content Catalog)* → `com.sap.portal.ivs.httpservice` → *Services* → *proxy*.

If a proxy server is entered there, you have to enter the TREX host in the field *http – Bypass Proxy Servers*.

Other Java applications based on J2EE 6.40

For other Java applications, you have to check the configuration of the J2EE Engine. The proxy settings belong to the Java parameters. If a proxy server is configured in the Java parameters, enter the TREX host in the parameter `nonProxyHosts`. You can choose one of the following options:

- Alternative 1: `D"http.nonProxyHosts=<hostname>.<mydomain>|localhost`
For `<hostname>.<domain>`, enter the host name and domain (if necessary) of the TREX host.
- Alternative 2: `D"http.nonProxyHosts=*<mydomain>|localhost`

You can change the Java parameters using the *SAP J2EE Engine GUI Config Tool*. For more information about using this tool, see the SAP Library at the Internet address help.sap.com → *Documentation* → *SAP NetWeaver*

 **Installation Check**

Purpose

If you have carried out all the steps described, TREX is ready for operation. You can carry out checks to ascertain whether the installation was successful.

 **Checking Processes**


Use

You can check on operating systems whether the TREX daemon is running and whether the required process has started.

Procedure

On UNIX

Log on with the user `<sapsid>adm`. Use `ps -fu <sapsid>adm`, to check whether the following processes are running. If TREX had been successfully installed, you can use the command `TREX info` to display all currently running TREX processes.

Process	HTTP Connection	RFC Connection
httpd	✓	
TREXDaemon.x  For the process <code>TREXDaemon.x</code> the symlink <code>trx.sap<SAPSID>_TRX<instance_number></code> will be shown. This is a symlink to <code>usr/sap/<SAPSID>/TRX<instance_number>/exe/TREXDaemon.x</code>	✓	✓

TREXIndexServer.x	✓	✓
TREXNameServer.x	✓	✓
TREXPreprocessor.x	✓	✓
TREXQueueServer.x	✓	✓
TREXRfcServer.x		✓

On Windows

Open the Task Manager and check whether the following programs are running:

Process	HTTP Connection	RFC Connection
TREXDaemon.exe	✓	✓
TREXIndexServer.exe	✓	✓
TREXNameServer.exe	✓	✓
TREXPreprocessor.exe	✓	✓
TREXQueueServer.exe	✓	✓
TREXRfcServer.exe		✓



Executing an Installation Test Script

Use

TREX delivers a Python script that you can use to test the basic functions of TREX. If the Python script is executed successfully, you know that TREX has been installed properly, the configuration files contain the necessary entries, and the TREX servers are running.

Procedure on UNIX

1. Log on with the user `<SAPSID>adm`.
2. Go to the TREX directory.


```
cd /usr/sap/<SAPSID>/trx<instance_number>
```
3. Set the environment variables required by TREX by executing one of the following scripts.
 - Bourne shell `sh`, Bourne-again shell `bash`, Korn shell `ksh`:


```
. TREXSettings.sh
```
 - C shell `csh`:


```
source TREXSettings.csh
```
4. Go to the directory in which the test script is located:


```
cd /usr/<SAPSID>/trx<instance_number>/exe/python_support
```
5. To run the test script, enter the following:


```
python runInstallationTest.py
```

Procedure on Windows

1. Log on with the user `<SAPSID>adm`.
2. Open a test console by choosing *Start* → *Programs* or *All Programs* → *SAP TREX* → *Instance <instance_number>* → *Tools* → *TREX_<instance_number> Console*.



Always use a test console when executing Python scripts. The correct environment variables are set in the test console.

You are now in the directory that the installation test script is located in:

```
<disk_drive>:\usr\sap\<SAPSID>\TRX<instance_number>\exe\python_support.
```

3. Run the test script in this directory:


```
python runInstallationTest.py
```

Result

The script carries out the following tests:

- Deleting any test indexes that were generated for a previous script run
- Creating a test index
- Indexing documents
- Testing search functions
 - Exact, error-tolerant (fuzzy), and linguistic searches
 - Search using Boolean operators such as AND and OR

The results are displayed at the end of the script run. You see the tested calls and their statuses (OK or Failed).

When you run the script for the first time, the call “Delete Index” has the status Failed. This is because there was no existing text index to be deleted. If this is the only cell with the status Failed, the test was successful.



Additional Information

Purpose

The sections below contain information on the following topics:

- Starting the TREX admin tool
- Controlling the installation from a remote computer
- Starting and stopping TREX
- Uninstalling TREX




Starting the TREX Admin Tool

Prerequisites

On UNIX: Since the TREX admin tool has a graphical interface, you need an X server. You cannot use a terminal program that only supports text mode, such as `telnet`.

Procedure

1. Log on with the user `<sapsid>adm`.
2. Carry out one of the following steps:

Operating System	Procedure
UNIX	Enter the following: <pre>cd <TREX_DIR> ./TREXAdmin.sh</pre>
Windows	Choose <i>Start</i> → <i>Programs</i> or <i>All Programs</i> → <i>SAP TREX</i> → <i>Instance <instance_number></i> → <i>Tools</i> → <i>TREX Administration</i>  You can also start the TREX admin tool by double-clicking <code><TREX_DIR>\TREXAdmin.bat</code> in Windows Explorer.



Controlling a SAPinst Installation from a Remote Machine

Purpose

You can run the SAPinst GUI in standalone mode to perform a remote installation.

This enables you to install an SAP system on another host (the remote host) while monitoring the installation with the SAPinst GUI on your local Windows or UNIX host (the local host).

Prerequisites

- Make sure that you have performed the preparation activities for your local host (SAPinst GUI host) and your remote host.
- Both hosts are on the LAN and can ping each other.

To test this:

- Log on to your remote host and enter the command `ping <local_host>`.
- Log on to the local host and enter the command `ping <remote_host>`.

Process Flow

1. You start SAPinst on the remote host
2. You start SAPinst GUI standalone.

For details, see the following sections.



Starting SAPinst GUI Separately

Use

You use this procedure to start SAPinst GUI separately. You might need to start SAPinst GUI separately in the following cases:

- You have logged off from SAPinst.
If you logged off during the installation and you later want to reconnect to the still running installation, you can start SAPinst GUI separately.
- You want to perform a remote installation.
If SAPinst GUI runs on a **different** host than SAPinst and the GUI server, you also have to start SAPinst GUI separately.

Prerequisites

You have done the step [Preparing the System for SAPinst GUI \[Page 28\]](#).

Procedure on UNIX

1. Log on to the installation host as **root**.
2. Mount the DVD with the installation files.



Mount the DVD locally. We do not recommend using Network File System (NFS).

3. Go to the following directory

```
<DVD_DIR>/IM_<OS>
```

4. Start SAPinst in the following way:

- If SAPinst GUI runs on the same host as SAPinst and the GUI server, enter the following command **without** additional parameters:

```
./startinstgui.sh
```

SAPinst GUI uses as default the local host.

- If SAPinst and the GUI server runs on a different host than SAPinst GUI (remote installation), enter the following command with additional parameters:

```
./startinstgui.sh -host <host_name>
```

<host_name> is the host name of the installation host.



- If you enter the command without additional parameters, SAPinst GUI uses as default the local host. SAPinst GUI starts and tries to connect to the GUI server and SAPinst. As SAPinst and the GUI server are running on another host, SAPinst GUI cannot connect and the SAP Installation GUI Connection dialog appears.

In this case, enter the host name where SAPinst is running and choose Log on.

The first dialog of the installation appears and you can perform the remote installation from your local host.

- For a list of options to start SAPinst GUI, change to the same directory as your SAPinst executable and enter the command `startinstgui.sh -h`.

Procedure on Windows

1. Log on to the installation host as a user with **administrator rights**.
2. Insert the DVD with the installation files in your DVD drive.
3. Go to the following directory:

```
cd <DVD_DIR>:\IM_WINDOWS<platform>
```

4. Start SAPinst GUI in one of the following ways:

- If SAPinst GUI runs on the same host as SAPinst and the GUI server, enter the following command without additional parameters:

```
startinstgui.bat
```

SAPinst GUI uses as default the local host.

- If SAPinst and the GUI server runs on a different host than SAPinst GUI (remote installation), enter the following command with additional parameters:

```
startinstgui.bat -host <host_name>
```

<host_name> is the host name of the installation host.



- If you enter the command without additional parameters, SAPinst GUI uses as default the local host. SAPinst GUI starts and tries to connect to the GUI server and SAPinst. As SAPinst and the GUI server are running on another host, SAPinst GUI cannot connect and the SAP Installation GUI Connection dialog appears.

In this case, enter the host name where SAPinst is running and choose Log on.

The first dialog of the installation appears and you can perform the remote installation from your local host.

- For a list of options to start SAPinst GUI, change to the same directory as your SAPinst executable and enter the command `startinstgui.bat -h`.



Starting SAPinst on the Remote Host

Use

You use this procedure to run SAPinst on the **remote** host when you want to run SAPinst as a remote installation. The remote host is the host where you want to install the SAP system.

Prerequisites

You have done the step [Preparing the System for SAPinst GUI \[Page 28\]](#).

Procedure on UNIX

1. Log on to the installation host as **root**.
2. Mount the DVD with the installation files.



Mount the DVD locally. We do not recommend using Network File System (NFS).

3. Enter the following commands:

```
<DVD_DIR>/IM_<OS>
./sapinst -nogui
```

SAPinst now starts and waits for the connection to the SAPinst GUI. That is, you see the following at the command prompt:

```
guiengine: no GUI connected; waiting for a connection on host
<host_name>, port <port_number> to continue with the installation.
```

4. You can now start the SAPinst GUI on your local host, as described in [Starting SAPinst GUI Separately \[Page 61\]](#).

Procedure on Windows

1. Log on to the installation host as a user with **administrator rights**.
2. Insert the DVD with the installation files in your DVD drive.
3. Enter the following commands:

```
<DVD_DIR>:\IM_WINDOWS_<platform>
```

```
sapinst.exe -nogui
```

SAPinst now starts and waits for the connection to the SAPinst GUI. You see the following at the command prompt:

```
guiengine: no GUI connected; waiting for a connection on host  
<host_name>, port <port_number> to continue with the installation
```

4. You can now start the SAPinst GUI on your local host, as described in [Starting SAPinst GUI Separately \[Page 61\]](#).



Starting and Stopping TREX on UNIX

Purpose

The following sections explain how to start and stop TREX on UNIX.

On UNIX, you use the shell scripts `startsap` and `stopsap` to start and stop TREX.



Starting TREX

1. Log on locally to the host on which the TREX instance is installed with the user `<sapsid>adm`.
2. Execute the script `startsap` in any directory:
 - a. To start a single TREX instance, enter the following:

```
startsap TRX<instance_number>
```

In the parameter `TRX<instance_number>`, you specify which TREX instance is to be started.
 - b. To start all SAP instances – including all TREX instances – on a host, enter the following:

```
startsap
```



Stopping TREX

1. Log on locally to the host on which the TREX instance is installed with the user `<sapsid>adm`.
2. Execute the script `stopsap` in any directory:
 - a. To stop a single TREX instance, enter the following:

```
stopsap TRX<instance_number>
```

In the parameter `TRX<instance_number>`, you specify which TREX instance is to be stopped.
 - b. To stop all SAP instances – including all TREX instances – on a host, enter the following:

```
stopsap
```




Starting and Stopping Individual TREX Servers

Use

You can start individual TREX servers for test purposes and for troubleshooting. You can then track the program output on the screen.

Starting the TREX Servers

1. Log on with the user <sapsid>adm.
2. Stop TREX (see [Stopping TREX \[Page 64\]](#)).
3. Go to the TREX directory.
4. Start each TREX server in a separate shell.

TREX Server	Command
Index server	<code>TREXIndexServer.x</code>
Name server	<code>TREXNameServer.x</code>
Preprocessor	<code>TREXPreprocessor.x</code>
Queue server	<code>TREXQueueServer.x</code>
Only relevant for an RFC connection: RFC server	<code>TREXRfcServer.x -r</code>

Stopping the TREX Servers

1. Display the window in which you started the TREX server.
2. Use `CTRL + C` or close the window.

Certain processing steps, for example, writing an index, cannot be interrupted. Such steps are completed before the TREX servers are stopped. This process can take a while to complete.

With large indexes, it can take up to a few hours to stop the TREX servers if lots of documents are currently being indexed.



Do not stop the TREX server using `kill - 9`, as this can lead to data loss. Affected indexes can be irreparably damaged.



Starting and Stopping TREX on Windows

Purpose

The following sections explain how to start and stop TREX on Windows:

On Windows, you can use the following methods to start and stop TREX:

- SAP Management console
- Executable files `startsap.exe` and `stopsap.exe`

SAP Management Console

You use the SAP Management console, a snap-in in the [Microsoft Management Console \(MMC\) \[Extern\]](#), to start and stop SAP systems and TREX instances. The snap-in consists of

a root node of the SAP system, below which the various SAP systems and their TREX instances appear as subnodes. The system displays detailed information about the processes, the current status, and open alerts for the instances.



A newly-installed MMC allows you only to start a locally-installed SAP instance on the host that you are logged on to. If the MMC is configured for central system administration, you can start and stop the entire SAP system from a single host.



For more information about the SAP Management console and the snap-in for the MMC, see the online application help and the SAP Library on *SAP Help Portal* help.sap.com → *SAP NetWeaver* → *.Solution Lifecycle Management* → *Solution Monitoring* → *Monitoring in CCMS* → *Microsoft Management Console*

As part of the installation of the global file system, the SAP service for the corresponding TREX instance (*SAP<sapsid>_TRX<instance_number>*) is registered as a Windows service. The service is configured so that it starts automatically when the host is started up, and stops automatically when the host is shut down. You can start and stop the service manually if necessary. You can also start the TREX servers individually for test purposes or troubleshooting.

Prerequisites

During the installation of the global file system, a SAP Management console has been installed on your host machine.

Executable Files *startsap.exe* and *stopsap.exe*

You use the executable files *startsap.exe* and *stopsap.exe* to start and stop TREX. After installation of the TREX instance, these files are located in the directory *<TREX_DIR>\exe* and are executed from that directory.



Starting TREX

Using the SAP Management Console to Start TREX

1. Log on with the user *<sapsid>adm*.
2. Launch the SAP Management console by double-clicking the program icon on your desktop or by choosing *Start* → *Programs* → *SAP Management Console*.
3. In the tree structure, choose the node for the central SAP instance *<SAPSID>* and navigate to the subnode for the TREX instance *<host>_<instance_number>* (for example, *p123456_77*).
4. Choose the right-hand mouse button to access the context menu.
5. Choose *Start*.

Using *startsap.exe* to Start TREX

1. Log on with the user *<sapsid>adm*.
2. Open a command prompt by choosing *Start* → *Programs* → *Instance_number* → *Tools* → *TREX_<instance_number>* so that the environment variables are set correctly.

3. Switch to the <TREX_DIR>/exe directory and enter the following:

```
startsap.exe name=<SAPSID> nr=TRX<instance_number> SAPDIAHOST
=<host>
```

In the SAPDIAHOST parameter, you specify the host name on which the TREX instance should be started.



```
startsap.exe name=ABC nr=TRX77 SAPDIAHOST =p123456
```

Stopping TREX

Using the SAP Management Console to Stop TREX

1. Log on with the user <sapsid>adm.
2. Launch the SAP Management console by double-clicking the program icon on your desktop or by choosing *Start* → *Programs* → *SAP Management Console*.
3. In the tree structure, choose the node for the central SAP instance <SAPSID> and navigate to the subnode for the TREX instance <host>_<instance_number> (for example, p123456_77).
4. Choose the right-hand mouse button to access the context menu.
5. Choose *Shutdown*.



The *Shutdown* command only stops the TREX processes once current transactions have been completed. Do not use the *Stop* command because this terminates the TREX processes abruptly and there is a risk of data loss.

Using stopsap.exe to Stop TREX

1. Log on with the user <sapsid>adm.
2. Open a command prompt by choosing *Start* → *Programs* → *Instance_number* → *Tools* → *TREX_<instance_number>* so that the environment variables are set correctly.
3. Switch to the <TREX_DIR>/exe directory and enter the following:

```
stopsap.exe name=<SAPSID> nr=TRX<instance_number> SAPDIAHOST =<host>
```

In the SAPDIAHOST parameter, you specify the host name on which the TREX instance should be stopped.



```
stopsap.exe name=ABC nr=TRX77 SAPDIAHOST =p123456
```



Do not use the Task Manager to stop the SAP service or the individual TREX servers. Otherwise, data can be lost. Affected indexes can be irreparably damaged.

Certain processing steps, for example, writing an index, cannot be interrupted. Such steps are completed before TREX is stopped. This process can take a

while to complete. With large indexes, it can take up to a few hours to stop the TREX servers if lots of documents are currently being indexed.



Starting and Stopping Individual TREX Servers

Use

You can start individual TREX servers for test purposes and for troubleshooting. You can then track the program output on the screen.

Starting the TREX Servers

1. Stop TREX (see [Stopping TREX \[Page 67\]](#)).
2. Open a separate prompt for each TREX server.
3. Go to the TREX directory and start the TREX server.

TREX Server	Command
Index server	<code>TREXIndexServer.exe</code>
Name server	<code>TREXNameServer.exe</code>
Preprocessor	<code>TREXPreprocessor.exe</code>
Queue server	<code>TREXQueueServer.exe</code>
Only relevant for an RFC connection: RFC server	<code>TREXRfcServer.exe -r</code>



In the properties of the prompt, deactivate the *QuickEdit Mode* option.

Leave the prompt open. If you want, you can minimize the window so that it is shown as a pushbutton in the Windows task bar.

Stopping the TREX Servers

1. Display the window in which you started the TREX server.
2. Use `CTRL + C` or close the window.

Certain processing steps, for example, writing an index, cannot be interrupted. Such steps are completed before the TREX servers are stopped. This process can take a while to complete.

With large indexes, it can take up to a few hours to stop the TREX servers if lots of documents are currently being indexed.



Do not use the Task Manager to stop the TREX servers. Otherwise, data can be lost. Affected indexes can be irreparably damaged.



Uninstalling TREX

Use

You can uninstall the TREX server software using SAPInst.



When you uninstall TREX, the entire TREX directory is deleted, **including all configuration data**. If the index directory and queue directory are located in the TREX directory, **all indexes and queues are deleted**.

Procedure on UNIX

1. Log on as **root**.
2. Stop TREX (see [Starting and Stopping TREX \[Extern\]](#)).
It can take a while to stop the TREX processes. Make sure that all of the TREX processes have stopped before you start the uninstallation process.
For an installation with an HTTP connection: Check that the Web server (HTTP daemon) has stopped. You can use the following command to do this:

```
ps -fu trx<instance_number> | grep httpd
```
3. Make sure that the environment variable `DISPLAY` has been set for root on `<host_name>`. `<host_name>` is the host on which the SAPInst GUI is to be displayed.
4. Start SAPInst.
 - If you are installing from the DVD, mount the DVD containing the installation files first.
 - If you are installing from the SAP Service Marketplace, navigate to the corresponding directory.

For a detailed description of these steps, see [Installing with SAPInst \[Page 34\]](#).

5. Once SAPInst has started, navigate in the *Welcome to SAP Installation Master* window to the following directory:
SAP NetWeaver 2004s → Lifecycle Management → Uninstall → Uninstall System or Stand-Alone Engine
6. In the *SAP System > General Parameters* window, enter the path to the directory in which the SAP system profiles are stored in the field *SAP System Parameters → Profile Directory*.
7. Choose *Next*.
8. In the *SAP System > Uninstallation* window, the TREX instances that you can uninstall appear.
By choosing the options *Remove all instances of the SAP system on this host?* and *Remove SAP System OS user?*, you can remove all TREX instances together with the associated operating system users from your host. You can only select the option *Remove SAP System OS user?*, if you have already selected *Remove all instances on this host?*.
9. Choose *Next*.
10. SAPInst displays the selected settings in the *Start Execution* window:
 - You can check the selected settings and choose *Edit* to change them if necessary.

- To start the uninstallation, choose *Next*.

Procedure on Windows

1. Log on as an administrator.
2. Start SAPinst.
 - If you are installing from the DVD, mount the DVD containing the installation files first.
 - If you are installing from the SAP Service Marketplace, navigate to the corresponding directory.

For a detailed description of these steps, see [Installing with SAPinst \[Page 34\]](#).

3. Once SAPinst has started, navigate in the *Welcome to SAP Installation Master* window to the following directory:

SAP Installation Master → *SAP ERP 2005* → *System Lifecycle Management* → *Uninstall* → *Uninstall SAP Systems*

4. In the *SAP System > General Parameters* window, enter the path to the directory in which the SAP system profiles are stored in the field *SAP System Parameters* → *Profile Directory*.
5. Choose *Next*.
6. In the *SAP System > Uninstallation* window, the TREX instances that you can uninstall appear.

By choosing the options *Remove all instances of the SAP system on this host?* and *Remove SAP System OS user?*, you can remove all TREX instances together with the associated operating system users from your host. You can only select the option *Remove SAP System OS user?*, if you have already selected *Remove all instances on this host?*.

7. Choose *Next*.
8. SAPinst displays the selected settings in the *Start Execution* window:
 - You can check the selected settings and choose *Edit* to change them if necessary.
 - To start the uninstallation, choose *Next*.



Information on SAPinst

Purpose

The following sections contain information on solving errors that affect SAPinst.



Troubleshooting during the installation

Procedure

If an error occurs during the input **phase**, SAPInst:

- Stops the installation
- Displays a dialog information about the error

You can now directly view the log file by choosing *View Logs*. Finally, you must abort the installation with *OK*, and try to solve the problem.

If an error occurs during the **processing phase**, SAPInst:

- Stops the installation
- Displays a dialog information about the error

You can now:

- Directly view the log file by choosing *View Logs*.
- Try to solve the problem



For SAP systems based on SAP Web AS Java 6.40 only:

For more information, see the *SAPInst Troubleshooting Guide for SAP Web AS Java Installation on SAP Service Marketplace*

service.sap.com/instguidesNW2004s → *Installation* → *SAP Web AS* → *SAP Web AS 6.40 <SR1> and Related Documentation*

- Retry the installation by choosing *Retry*
- Abort the installation by choosing *OK*.

For more information, see [Interrupted Installation with SAPInst \[Page 71\]](#).



Interrupted Installation with SAPInst

Use

The SAP system installation might be interrupted for one of the following reasons:

- An error occurred during the processing phase.

SAPInst does not abort the installation in error situations. If an error occurs during the processing phase, the installation will hold and a dialog box appears. The dialog box contains a short description about the choices listed in the table below as well as a path to a log file that contains detailed information about the error.

- You interrupted the installation by choosing *Exit* in the SAPInst menu. The following table describes the options in the dialog box:

Option	Meaning
--------	---------

Retry	<p>SAPinst retries the installation from the point of failure without repeating any of the previous steps.</p> <p>This is possible because SAPinst records the installation progress in the <code>keydb.xml</code> file.</p> <p>We recommend that you view the entries in the log files, try to solve the problem and then choose Retry.</p> <p>If the same or a different error occurs again, SAPinst displays the same dialog box again.</p>
Stop	<p>SAPinst stops the installation, closing the dialog box, the SAPinst GUI, and the GUI server.</p> <p>SAPinst records the installation progress in the <code>keydb.xml</code> file. Therefore, you can continue the installation from the point of failure without repeating any of the previous steps. See the procedure below.</p>
Continue	<p>SAPinst continues the installation from the current point.</p>



UNIX only:

You can also terminate SAPinst by choosing Ctrl+C. However, we do not recommend that you use Ctrl+C, because this kills the process immediately.

Prerequisites

You solved the problem that caused the error situation.

Procedure on UNIX

1. Log on to the installation host as **root**.
2. Mount the DVD with the installation files.



Mount the DVD locally. We do **not** recommend using Network File System (NFS).

3. Enter the following commands:


```
cd <DVD_DIR>/IM_<OS>
./sapinst
```
4. From the tree structure in the *Welcome* screen, select the installation service that you want to continue and choose *Next*.



If there is only one component to install, the Welcome screen does not appear.

The *What do you want to do?* screen appears.

5. In the *What do you want to do?* screen, decide between the following alternatives and choose *OK*.

Alternative	Behavior
-------------	----------

<i>Run a new Installation</i>	<p>The interrupted installation is not continued. Instead, SAPinst moves the content of the old installation directory and all installation-specific files to the backup directory. Afterwards, you can no longer continue the old installation.</p> <p>For the backup directory, the following naming convention is used: <log_day_month_year_hours_minutes_seconds> (for example, log_01_Oct_2003_13_47_56).</p>
<i>Continue old installation</i>	<p>The installation that was interrupted is continued from the point of failure.</p>

Procedure on Windows

1. Log on to the installation host as a user with **administrator rights**.
2. Insert the DVD with the installation files in your DVD drive.
3. Enter the following commands:

```
cd <DVD_DRIVE>:\IM_WINDOWS<platform>
```

```
sapinst.exe
```

4. From the tree structure in the *Welcome* screen, select the installation service that you want to continue and choose *Next*.



If there is only one component to install, the *Welcome* screen does not appear.

The *What do you want to do?* screen appears.

5. In the *What do you want to do?* screen, decide between the following alternatives and choose *OK*.

Alternative	Behavior
<i>Run a new Installation</i>	<p>The interrupted installation is not continued. Instead, SAPinst moves the content of the old installation directory and all installation-specific files to the backup directory. Afterwards, you can no longer continue the old installation.</p> <p>For the backup directory, the following naming convention is used: <log_day_month_year_hours_minutes_seconds> (for example, log_01_Oct_2003_13_47_56).</p>
<i>Continue old installation</i>	<p>The installation that was interrupted is continued from the point of failure.</p>



Handling the CD Browser

Procedure

The following tells you how to handle the CD Browser window. SAPinst displays this window in following situations:

1. SAPinst wants to check the availability of the software package.

You can recognize this situation by the flag *Check Location* displayed on the *CD Browser Window*.

Choose one of the following actions:

Action	Result
You do not enter any package location and leave the flag <i>Check Location</i> deselected.	SAPinst skips the check and you can continue the installation procedure. However, SAPinst asks later for the missing LABEL.ASC (see step 2 below).
You enter the path of the package location and leave the flag <i>Check Location</i> deselected.	SAPinst skips checking the label location, but your entered package locations are used later for the installation. SAPinst only asks again for a missing LABEL.ASC if the package location is incorrect (see step 2 below).
You enter the path of the package location and select the flag <i>Check Package Location</i> .	SAPinst checks the label location and displays an error message if the location is incorrect. If all locations are correct, SAPinst does not ask again for the LABEL.ASC files later.

2. SAPinst cannot find the correct LABEL.ASC but needs the location of the software to process the installation now.

You can recognize this situation by the missing flag *Check Location* on the *CD Browser* window. You now have to enter the path to the correct LABEL.ASC. Otherwise, the installation cannot continue.

Additionally, you can copy the installation package by entering a location in the column *Copy Package to*.