

First Steps User's Guide

TTsuites – General Information

This user's guide helps you to download and install TTworkbench, and guides you through configuring and running test cases of TTsuites.

1. Requirements
2. Download
3. Installation
4. Running My First Test Case
5. Configuration
6. Details
7. Updates
8. Appendix

Testing
Technologies

The logo for Testing Technologies features the company name in a dark red, sans-serif font. The text is positioned above a horizontal line. To the right of the text, there is a large, stylized graphic element consisting of a dark red semi-circle at the top and a white semi-circle at the bottom, separated by a vertical line.

For a successful proceeding please follow the instructions step by step!

If you need any assistance please contact Testing Technologies' customer care department:

Mr. Dirk Borowski

Phone: +49 30 726 19 19 0

Email: ttcn3-support@testingtech.com

For bug and error reports please use our ticket system at www.support.testingtech.com.

1. Requirements

Operating Systems: Microsoft Windows XP, Vista, 7 (x86-32, x86-64)
Red Hat Enterprise Linux (GTK, x86-32, x86-64)
Fedora (GTK, x86-32, x86-64)
SUSE Linux (GTK, x86-32, x86-64)

Java 2 Platform (JRE): Version J2SE 6.0 (1.6.x)
Download at www.oracle.com/technetwork/java/javase/downloads/index.html.
Please note that we **strongly** recommend to use the above Java JDK. With the OpenJDK/IcedTea for Linux the TTworkbench license **will not work correctly**.

Memory: 2 GB (4 GB recommended)

Reference ID and License File

Before you download TTworkbench and TTsuite, make sure you received a valid Reference ID and license file. Otherwise please contact our sales team at sales@testingtech.com.

2. Download

Please use Testing Technologies' download portal: www.testingtech.com/support/downloads.php.

Step 1

Select the latest version of TTworkbench (Express, Basic or Professional) for your platform.

Step 2

Enter your **Download Reference ID** (valid for TTworkbench AND TTsuite-xxx).

Step 3

Download the file and save it in your favored directory.

NOTE! With the Linux version of Microsoft Internet Explorer, the browser saves the **.jar file** as .zip. Just rename it back to .jar.

Step 4

Repeat steps 1-3 to download TTsuite-xxx (**TTsuite-xxx_-archived-site.zip**).

Step 5

Save the license file **license.dat** in your favored directory.

3. Installation

3.1. TTworkbench

Step 1

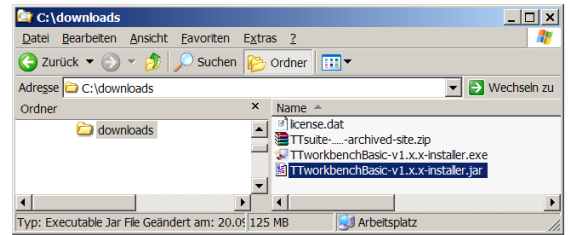
Windows Platform:

Double click on **TTworkbench-xxx-installer.exe** (to be found on desktop or selected directory).

Linux Platform:

Use command line

java-jar TTworkbench-xxx-installer.jar

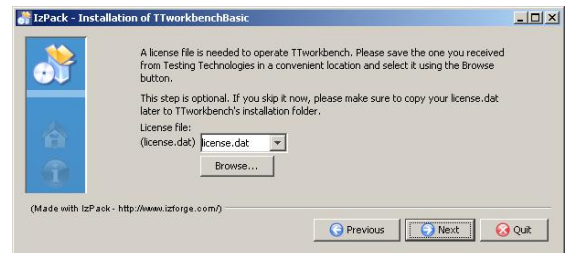


Step 2

Follow the pop up installation wizard...

On request, browse for the valid license file **license.dat**, already saved in your favored directory.

(TTsuite-xxx and TTworkbench require a **valid license file** for execution, which was sent to you by mail.)

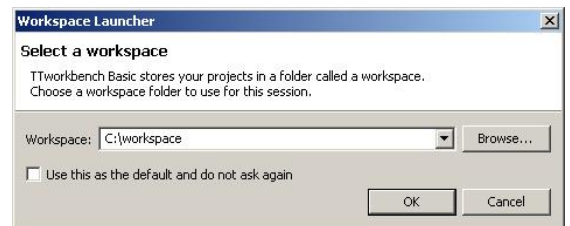


Step 3

Start TTworkbench from created desktop icon or menu entry.

Step 4

Start a new workspace by accepting the default workspace location on request or choose an existing one.

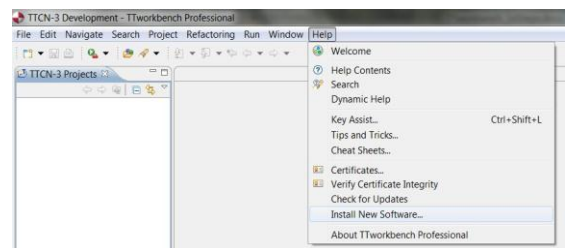


3.2. TTsuite-xxx*

* The screen shots used are from TTsuite-SIP as an example.

Step 5

In the TTworkbench menu, click on menu item *Help* → *Install New Software...*

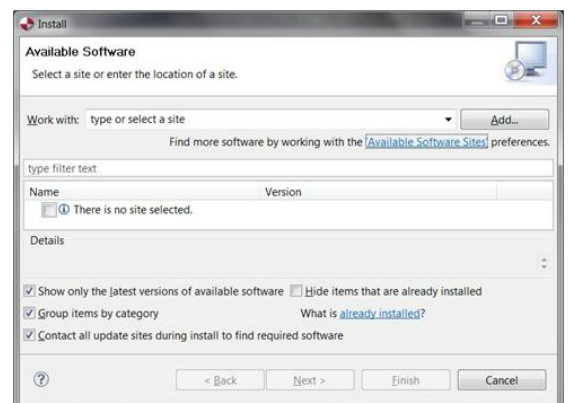


Step 6

Click *Add...* → *Archive*.

Choose the downloaded installation file **TTsuite-xxx-archived-site.zip**. Click the check box with *Test Suites* → *Next* → *Finish*.

Accept the terms of license agreements. Finish and confirm to restart TTworkbench.

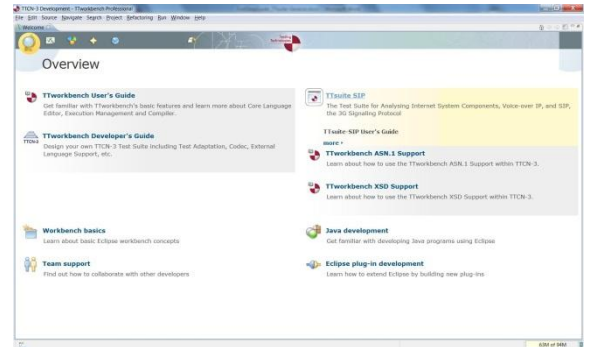


Step 7

After restart, please import the installed TTsuite.

Option A:

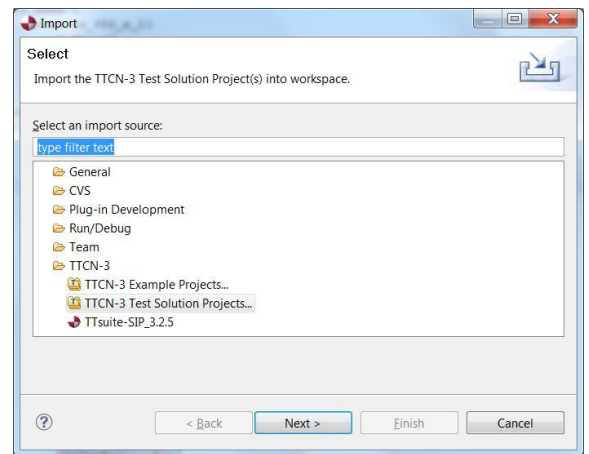
In the welcome tab, please click on the newly installed TTsuite link. This TTsuite will be imported as a project.



Option B:

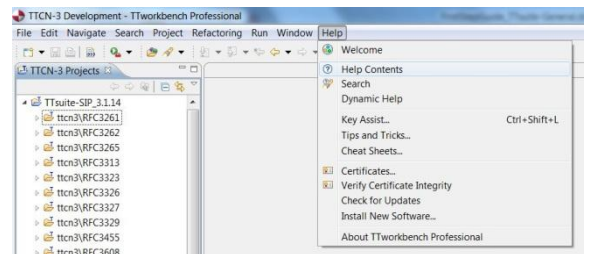
Close the welcome tab. In the project view, just click on the right mouse button, go to menu:

File → *Import* → *TTCN-3* → *TTCN-3 solution projects*
→ *select the installed TTsuite* → *Finish*.



Further details about installation you can find in the integrated Users Guide. Click on:

Help → *Help Contents* → *Testing Tech TWorkbench Users Guide*.

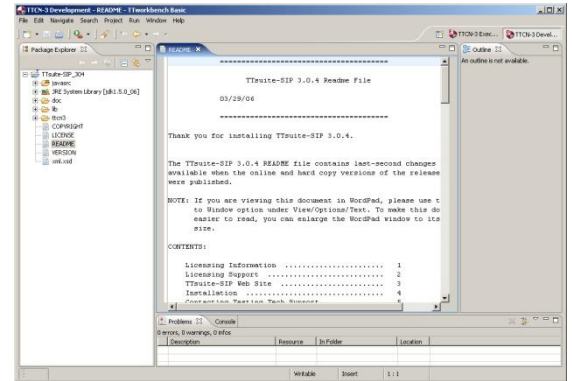


4. Running My First Test Case*

* The screen shots used are from TTSuite-SIP as an example.

Step 1

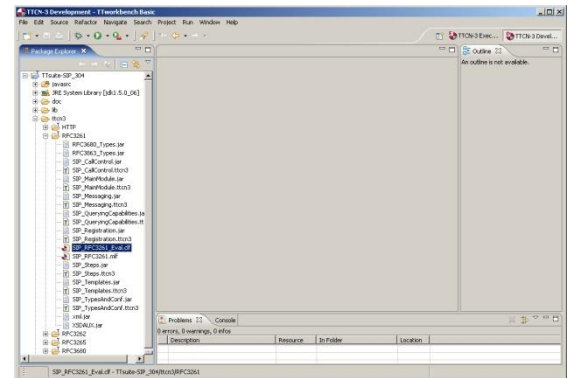
Open the **TTsuite-xxx** folder in the Package Explorer (TTCN-3 Development Perspective).



Step 2

Open the folder **ttcn3** and double click on the test campaign loader file **xxx.clf** (with the icon).

(The perspective will automatically switch into the TTCN-3 Execution Management.)



Step 3

Start your IUT (or any simulated SUT, here a softphone).

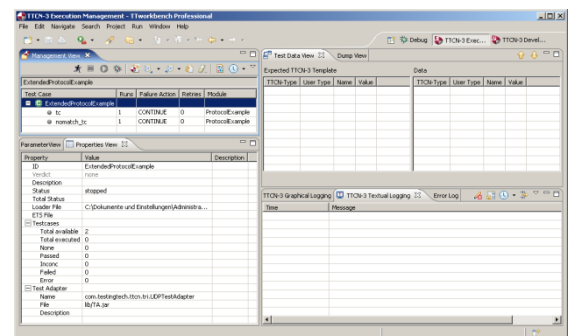


Step 4*

Execution:

Select one test case by single click and press the *Execute tests* button .

This test case is already configured and was taken as an example from "5. Configuration".



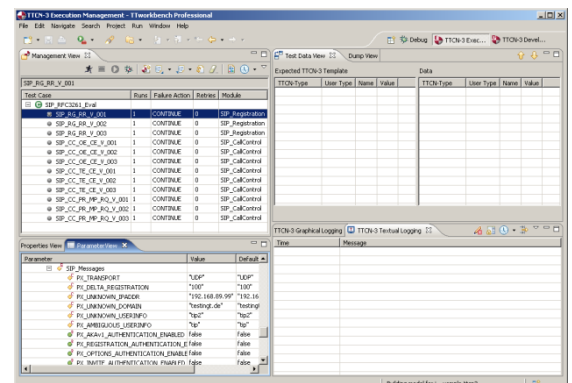
Step 5 (Extension)

Click on Test campaign name to edit the parameters in the Parameter View (below Management View).

For configuration details please refer to "Chapter 5. Parameterization".

Hint:

Parameters are configured with default value. Please use MBS (Message Building System) to change the value.



* Further details please find under: *Help* → *Help Contents* → *Testing Tech TTSuite-xxx*.

Analysis

- Click on the TTCN-3 Graphical Logging tab. It shows the results of the execution as a graphical output.
- A single click on a “send” message arrow provides further details of the TTCN-3 template representation in the Test Data View. Double click on “send” and “receive” arrows for a coding in the Dump View.
- A single click on a “match” or “mismatch” box shows you the received message compared to the expected TTCN-3 template. Mismatched values are marked red.

The screenshot displays the TTCN-3 Execution Management interface with several key components:


- Management View:** A table listing test cases and their execution status.

Test Case	Runs	Failure Action	Retries	Module
SIP RFC3261_Eval	1	CONTINUE	0	SIP_Registration
SIP_RG_RR_V_001	1	CONTINUE	0	SIP_Registration
SIP_RG_RR_V_002	1	CONTINUE	0	SIP_Registration
SIP_RG_RR_V_003	1	CONTINUE	0	SIP_Registration
SIP_CC_OE_CE_V_001	1	CONTINUE	0	SIP_CalControl
SIP_CC_OE_CE_V_002	1	CONTINUE	0	SIP_CalControl
SIP_CC_OE_CE_V_003	1	CONTINUE	0	SIP_CalControl
SIP_CC_TE_CE_V_001	1	CONTINUE	0	SIP_CalControl
- Test Parametrization:** A table listing parameters and their values.

Parameter	Value	Default
SIP_Messages		
PX_TRANSPORT	"UDP"	"UDP"
PX_DELTA_REGISTRATION	"100"	"100"
PX_UNKNOWN_IPADDR	"192.168.89.99"	"192.168.89.99"
PX_UNKNOWN_DOMAIN	"testing.de"	"testing.de"
PX_UNKNOWN_USERINFO	"tcp"	"tcp"
PX_ambiguous_USERINFO	"tcp"	"tcp"
PX_AVA1_AUTHENTICATION_ENABLED	false	false
PX_REGISTRATION_AUTHENTICATION_ENABLED	false	false
PX_OPTIONS_AUTHENTICATION_ENABLED	false	false
PX_INVITE_AUTHENTICATION_ENABLED	false	false
PX_BYE_AUTHENTICATION_ENABLED	false	false
PX_RFC2617_USERNAME	"abcd"	"abcd"
PX_RFC2617_USERNAME2	"abcd"	"abcd"
PX_RFC2617_PASSWORD	"1234"	"1234"
- Test Data View:** A table showing expected and actual data for various fields like Response, Statusline, and Reas....
- Graphical Online Logging:** A sequence diagram showing SIP messages (INVITE, CANCEL) and their responses (200 OK, 486 Busy Here) with match/mismatch indicators.
- Result Analyser:** A panel for analyzing the results of the test execution.

Saving Configurations and Test Results

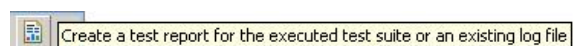
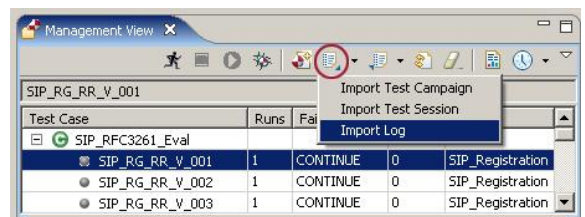
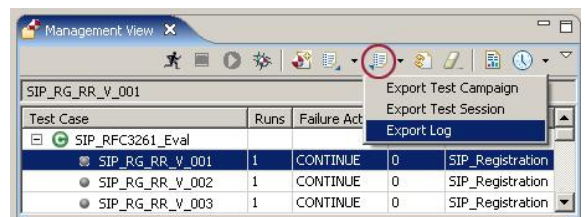
The current executed run of test cases can be saved in a *.tlz file by pressing the export button and selecting “Export Log” in the Management View.

The generated *.tlz file (with the icon ) contains the current configuration (CLF) and the executed log traces.

For reviewing, this file can be imported by pressing the import button and selecting “Import Log”.

To run configured test cases again, please press the import button and select “Import Session”.

In order to generate a test report, use this button.

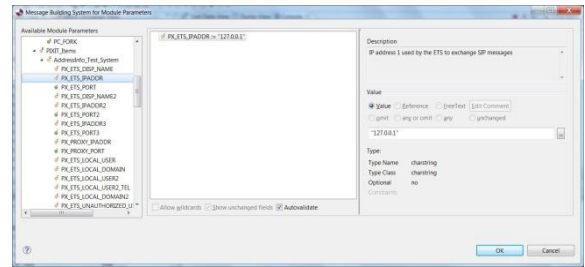


Further details about execution and savings you can find in the integrated Users Guide, Chapter “Using TTworkbench TTman”. Click on: [Help](#) → [Help Contents](#) → [Testing Tech TTworkbench Users Guide](#).

5. Configuration

Please configure your TTsuite according to the protocol and your local settings. You can use our MBS (Message Building System) to ease it up.

In the Parameter View of the Execution Management you find different parameters to change the settings for your individual test configuration. Please click on the right mouse button over the parameter view to open Message Building System. You can access the single parameter and the attributes of single fields. After finishing, just click on OK to save the change. The changed parameters are called by the test system during runtime. You can run your test campaign with the new configuration at once without recompilation of your test cases.



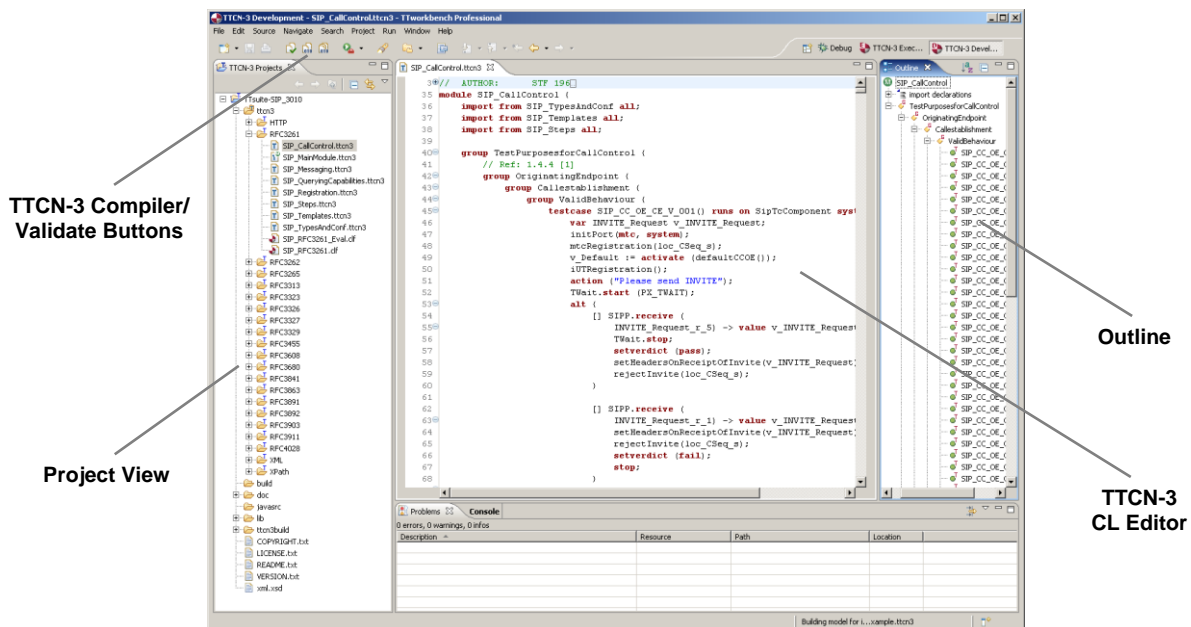
For further details about Test Suite Properties, please open the Development View (Package Explorer) and click on: *TTsuite-xxx* → *doc* → *TTsuite-xxx_UsersGuide* → *index.html*.

6. Details



Core Language Editor (CL Editor)

Each TTCN-3 file is view- and editable by double clicking in the CL Editor. As shown in Step 1 of “4. Running My First Test Case” you find the TTCN-3 source code (*.ttcn3) in folder **ttn3**.

After opening the files, the source code will be syntactically checked and highlighted. In addition, an outline will be generated automatically and the go-to-declaration feature will be enabled.




TTthree (TTCN-3 Compiler)

For recompiling all TTCN-3 files, please open the main module (with the icon ) in the CL Editor by double click. Press the *Rebuild* button . After recompilation follow Step 2 of “4. Running My First Test Case”.

NOTE! Compilation is only necessary if some test cases are changed or some new one is created. Otherwise, the generated *.jar files from TTCN-3 source are already available for execution.

TTman (Test Execution Management)

In order to execute test cases and configure parameters, the CLF has to be loaded into the Test Execution Management.

In **ttcn3** or **ttcn3folder** folder, you will find at least one CLF file (with the icon ). It contains all the test cases, which are organized in specific group structures.

NOTE! You are able to execute all test cases **only**, if you have purchased the test suite. With your evaluation license file you may only run the some test cases for evaluation.

Further details you can find in the integrated Users Guide, Chapters "Using TTworkbench CL Editor", "Using TTworkbench TTthree" and "Using TTworkbench TTman". Click on: *Help* → *Help Contents* → *Testing Tech TTworkbench Users Guide*.

7. Updates

Please refer to "3.2. TTsuite-xxx".

8. Appendix

Acronyms

CL Editor	Core Language Editor	MLF	Module Loader File
CLF	Campaign Loader File	OS	Operating System
IUT	Implementation Under Test	SUT	System Under Test
MBS	Message Building System	TLZ	Test Logging Zip File

Notes

This document is subject to change without notice.

Testing Technologies IST GmbH
Michaelkirchstraße 17/18
10179 Berlin, Germany

Phone: +49 30 726 19 19 -0
Fax: +49 30 726 19 19 -20
Email: info@testingtech.com
Internet: www.testingtech.com

Testing Technologies, the Testing Tech logo, TTworkbench and TTsuite are trademarks or registered trademarks of Testing Technologies IST GmbH. Other terms are used for identification purposes and are trademarks or registered trademarks of their respective companies. Testing Technologies' TTsuite is powered by Eclipse technology and includes Eclipse plug-ins that can be installed and used with other Eclipse 3.1-based offerings. It includes software developed by the Apache Software Foundation (<http://www.apache.org/>), ANTLR (<http://www.antlr.org/>), Tigris.org (<http://gef.tigris.org/>), and L2FProd.com (<http://L2FProd.com/>).