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EPTF CLL NameService, Function Description

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# Introduction

## Revision history

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| --- | --- | --- | --- |
| Date | Rev | Characteristics | Prepared |
| 2007-12-03 | PA1 | First draft version | ETHJGI |
| 2007-12-05 | PA2 | Updated after review | ETHJGI |
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## How to Read this Document

This is the Function Description for the NameService feature of the Ericsson Performance Test Framework (TitanSim), Core Load Library (CLL). TitanSim CLL is developed for the TTCN-3 ‎[1] Toolset with TITAN ‎[2]. For more information on the TitanSim CLL please consult the Product Revision Information ‎[3].

## References

1. ETSI ES 201 873-1 v3.2.1 (2007-02)  
   The Testing and Test Control Notation version 3. Part 1: Core Language
2. 1/198 17-CRL 113 200 Uen  
   User Guide for the TITAN TTCN-3 Test Executor
3. 109 21-CNL 113 512-2 Uen   
   TitanSim CLL for TTCN-3 toolset with TITAN, Product Revision Information
4. 155 17-CNL 113 512 Uen   
   TitanSim CLL for TTCN-3 toolset with TITAN, Function Specification
5. TitanSim CLL for TTCN-3 toolset with TITAN, Reference Guide  
   http://ttcn.ericsson.se/products/libraries.shtml

## Scope

This document is to specify the content and functionality of the NameService feature of the TitanSim CLL.

## Recommended way of reading

The readers are supposed to get familiar with the concept and functionalities of TitanSim CLL ‎[4]. They should get familiar with the list of acronyms and the glossary in Section ‎1.7 and ‎1.8, respectively.

## Typographical conventions

Important concepts are denoted by *italic* font wherever they are first used in the given context. Moreover, whenever a concept is mentioned that has a special meaning as described in the Glossary (Section ‎1.8) of this document, then these occurrences are marked with an initial arrow, e.g., 🡪 TitanSim.

## Abbreviations

CLL Core Load Library

EPTF Ericsson Load Test Framework, formerly TITAN Load Test Framework

TitanSim Ericsson Load Test Framework, formerly TITAN Load Test Framework

TTCN-3 Testing and Test Control Notation version 3 ‎[1]

## Terminology

*TitanSim Core (Load) Library(CLL)* is that part of the TitanSim software that is totally project independent. (I.e., which is not protocol-, or application-dependent). The TitanSim CLL is to be supplied and supported by the TCC organization. Any TitanSim CLL development is to be funded centrally by Ericsson

# General Description

This document specifies the NameService feature of the TitanSim CLL.

The EPTF Name Service feature makes it possible to register and query component references by name. Any charstring can be registered into the name service by the name service client components. When the registered charstring name is queried by some other name service client component, the component reference of the component which registered the name is returned.

The registered names are stored in the EPTF\_NS\_CT component. The components which can register names in the EPTF\_NS\_CT have to extend EPTF\_NS\_Client\_CT.

The NS client component has the following functionality

* register a name in the NS
* query a name from the name service

# Functional Interface

Apart from this description a cross-linked reference guide for the TitanSim CLL Functions can be reached for on-line reading ‎[5].

## Naming Conventions

All functions have the prefix f\_EPTF\_NS\_.

## Public Functions

### Initialization

#### Name Service main component

Before using the EPTF NameService functions one of the components in the system should extend the NameService main component EPTF\_NS\_CT. On that component the NS should be initialized:

f\_EPTF\_NS\_init\_CT(…)

This activates the main event handler of EPTF\_NS\_CT. The main behaviour function running on the component should have an alt-loop, and should only be terminated at shutdown. This component stores the registered items.

If the NS is running on a separate component the function

f\_EPTF\_NS\_main\_CT(selfName)

can be used as a behaviour function that can be started on the component. This function calls f\_EPTF\_NS\_init\_CT and executes an endless alt-loop that handles the NS client messages. The init function automatically registers the cleanup function of the EPTF NameService.

#### Name Service Clients

The client component which can register names into the main component should also be initialized:

f\_EPTF\_NS\_Client\_init\_CT(selfName, NS\_compRef)

This function initializes the EPTF NS Client component. The NS\_compRef argument specifies the component reference where the EPTF NS is running. After this function call the client can register and query names from the EPTF\_NS\_CT component. The init function automatically registers the cleanup function of the EPTF NameService Client.

### Register Name

To register a name in the NS, call the function

f\_EPTF\_NS\_RegisterName(name)

Note, that it is possible to specify an optional integer Id for the name, which will be returned in the query response with the component reference.

### Deregister Name

To clear a name from the NS call:

f\_EPTF\_NS\_DeregisterName(name)

This function removes the name from the NS database for the component which calls this function.

### Query

To query a registered name call the function

f\_EPTF\_NS\_Query(name, resp)

The result is returned in the second argument. Its type is QueryResp, which contain the reference to the component that registered the name and the optional id if that was specified when the name was registered. If the name is not registered, omit is returned for the component reference. The type of the component returned is EPTF\_NS\_Client\_CT.

### Upcast/downcast

To change the type of the component returned by the query the following functions can be used:

f\_EPTF\_NS\_Client\_upcast(compRef)

f\_EPTF\_NS\_Client\_downcast(compRef)

They transform the type to/from EPTF\_Base\_CT. The upcast/downcast functions of EPTF Base and EPTF Variable can be used to cast the type further.

## Summary Table of all public functions for EPTF NameService

Table 1. Summary of EPTF NameService functions

| Function name | Description |
| --- | --- |
| f\_EPTF\_NS\_ init\_CT | Initializes the EPTF\_NS\_CT component |
| f\_EPTF\_NS\_Client\_init\_CT | Initializes the EPTF NS Client component |
| f\_EPTF\_NS\_RegisterName | Register a name into the NS server |
| f\_EPTF\_NS\_DeregisterName | Deregisters a name from the NS server |
| f\_EPTF\_NS\_Query | Queries a name from the NS server |
| f\_EPTF\_NS\_Client\_upcast | Casts the EPTF\_NS\_Client\_CT component reference to EPTF\_Base\_CT |
| f\_EPTF\_NS\_Client\_downcast | Casts the EPTF\_Base\_CT component reference to EPTF\_NS\_Client\_C |