

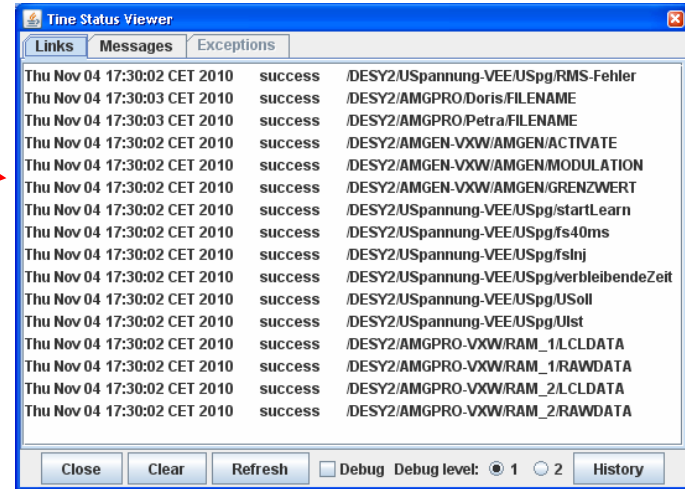
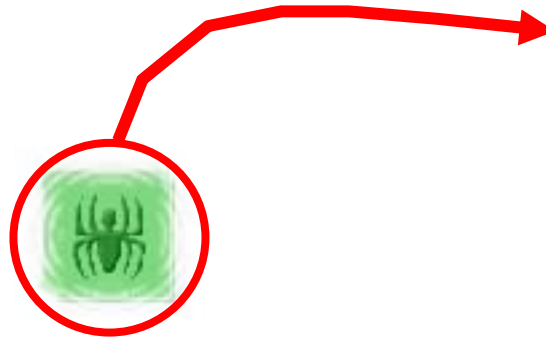
Tarantula

Examine the TINE link chain

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TINE Meeting
Hamburg, 12.11.2010

Present representation for TINE information of an Application

- > To obtain information about all TINE links of an application the user can invoke a simple information panel we call "The Spider":



Links	Messages	Exceptions
Thu Nov 04 17:30:02 CET 2010	success	/DESY2/USpannung-VEE/USpg/RMS-Fehler
Thu Nov 04 17:30:03 CET 2010	success	/DESY2/AMGPRO/Doris/FILENAME
Thu Nov 04 17:30:03 CET 2010	success	/DESY2/AMGPRO/Petra/FILENAME
Thu Nov 04 17:30:02 CET 2010	success	/DESY2/AMGEN-VXW/AMGEN/ACTIVATE
Thu Nov 04 17:30:02 CET 2010	success	/DESY2/AMGEN-VXW/AMGEN/MODULATION
Thu Nov 04 17:30:02 CET 2010	success	/DESY2/AMGEN-VXW/AMGEN/GRENZWERT
Thu Nov 04 17:30:02 CET 2010	success	/DESY2/USpannung-VEE/USpg/startLearn
Thu Nov 04 17:30:02 CET 2010	success	/DESY2/USpannung-VEE/USpg/fs40ms
Thu Nov 04 17:30:02 CET 2010	success	/DESY2/USpannung-VEE/USpg/fshj
Thu Nov 04 17:30:02 CET 2010	success	/DESY2/USpannung-VEE/USpg/verbleibendeZeit
Thu Nov 04 17:30:02 CET 2010	success	/DESY2/USpannung-VEE/USpg/USoll
Thu Nov 04 17:30:02 CET 2010	success	/DESY2/USpannung-VEE/USpg/Ulst
Thu Nov 04 17:30:02 CET 2010	success	/DESY2/AMGPRO-VXW/RAM_1/LCLDATA
Thu Nov 04 17:30:02 CET 2010	success	/DESY2/AMGPRO-VXW/RAM_1/RAWDATA
Thu Nov 04 17:30:02 CET 2010	success	/DESY2/AMGPRO-VXW/RAM_2/LCLDATA
Thu Nov 04 17:30:02 CET 2010	success	/DESY2/AMGPRO-VXW/RAM_2/RAWDATA

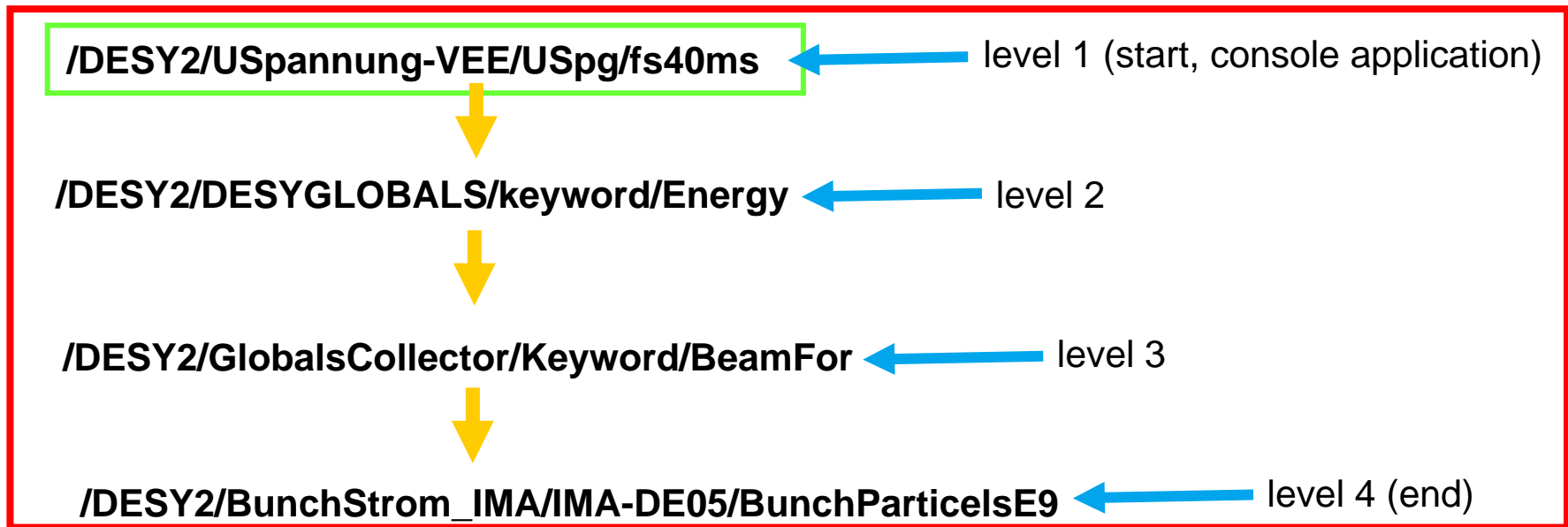
Close Clear Refresh Debug Debug level: 1 2 History

- > This panel reflects information about all opened asynchronous TINE addresses next to the status of the link
- > Currently the selected connections only retrieve details up to "level 1", but doesn't fetch any information for deeper links in the chain



Incidental Remark: What do I mean with “level” or “depth”?

- > A “level” or “depth” is the depth in the TINE connection chain, starting from the console application until the front-end-server.
- > Example
A console application may have the following address elements in the chain:



This is the connection chain, including all four TINE addresses



Problem analyzes

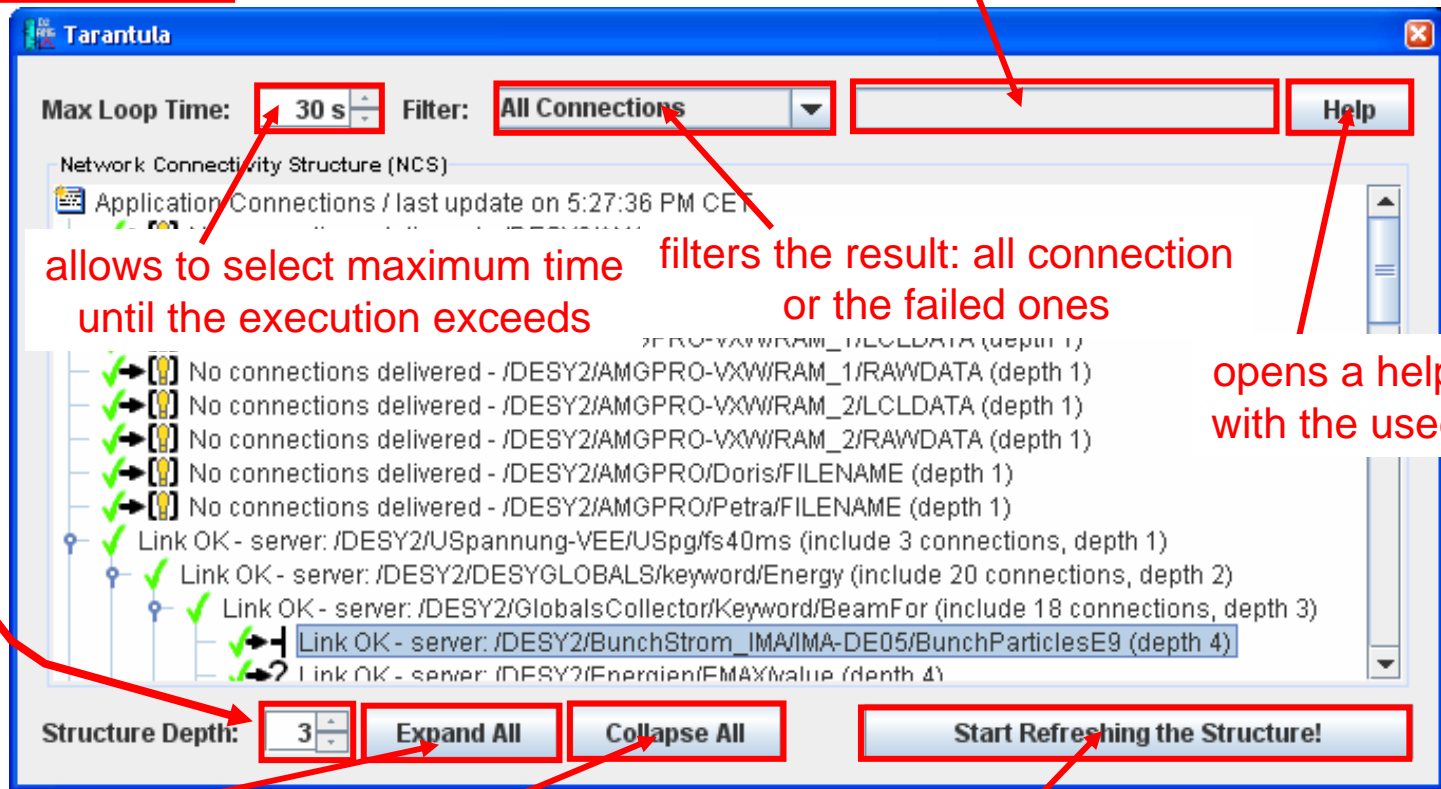
- > The current solution:
 - fetches for every asynchronous link its state
 - displays the result periodically in the spider panel
- > This only reveals predication about the first level of connections but doesn't deliver any information about deeper links
- > What happens with failures on servers in a deeper level? Currently they are not reported in the Spider panel!

- > => To close this gap of the Spider a new panel was created which helps to deliver more information about deeper connection elements in the connection chain.



Solution and Implementation: Tarantula

- > Tarantula¹ panel allows you now to watch all TINE links in the chain up to the predefined depth: progress bar, only active during updating the structure



allows to select maximum time until the execution exceeds

filters the result: all connection or the failed ones

opens a help panel with the used icons

Expands all connections

Collapses all connections

interactively starts updating the connection structure

¹ Tarantula is a metaphor for a higher level of information from the connection chain and the status of the links.



Context Menu

- > The context menu allows the user to perform a functionality depending on the state of the underlying connection node, for example to fetch the next connection level

The screenshot shows the Tarantula application window. At the top, there are controls for 'Max Loop Time' (set to 30 s) and a 'Filter' dropdown (set to 'All Connections'). Below this is a tree view of the 'Network Connectivity Structure (NCS)'. A context menu is open over a node, listing several actions: 'Get information...' (highlighted with a red box), 'Verify the failed address...', 'Fetch next connection' (with a mouse cursor), 'Fetch more connections of a specified level...', 'Expand all ascending connections', and 'Collapse all ascending connections'. A red arrow points from the 'Fetch next connection' menu item to a 'Connection information...' dialog box. This dialog box displays details for the server address '/DESY2/USpannung-VEE', including description, responsible person, location, and other technical specifications.

Connection information...

Information about server address /DESY2/USpannung-VEE

Description:	DESY2 Lernmode
Responsible:	Uwe Hurdelbrink mkibri
Location:	bdg 20 rm SER E5 (2)
FEC name:	D2LERN.FEC
Equipment name:	D2LERN
Operating system:	WIN32
TINE version:	4.01.0010
Hardware:	VXI-Crate
Host name:	MSK-XP SER2.desy.de (131.169.128.231)
Port offset:	9

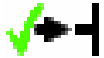
OK



Most used Icons ...



executes with success



executes with success and reaches the end node; there are no more connections



executes with success; there are more connections underneath this link



executes with success but all ascending servers are ignored, for example the ARCHIVE server



executes with success but detects a TINE version mismatch; TINE doesn't deliver more information about ascending links of the current version



Maximum time exceeded



failed connection; reports the current TINE address beside information of the state



all connections marked with this warning include underneath a failed link

More Icons: Circle Loop

✔️🔒 executes with success but detects a circle loop

/COMMON.TEST/TestTarantula01/Device01/testFloat (level 1)

Application Connections / last update on 3:38:28 PM CET

- ✔️ Link OK - server: /COMMON.TEST/TestTarantula01/Device01/testFloat (include one connection, depth 1)
- ✔️ Link OK - server: /LINAC2/StrahlBedarf/Strahlbedarf/Anmeldung (include 11 connections, depth 2)
- ✔️ Link OK - server: /DESY2/Kicker/Kicker24_R/ErrorDiscription (include 7 connections, depth 3)

/LINAC2/StrahlBedarf/Strahlbedarf/Anmeldung (level 2)

- ✔️ Link OK - server: /DESY2/D2KICKER.CDI/#33-#48/RECV (depth 4)
- ✔️ Link OK - server: /DESY2/D2KICKER.CDI/#49-#64/RECV (depth 4)

/DESY2/Kicker/Kicker24_R/ErrorDiscription (level 3)

- ✔️ Link OK - server: /LINAC2/UmschaltManager/UmschaltManager/KickerStatusTimeStamp (inc
- ✔️🔒 Link OK - server: /DESY2/Kicker/Kicker24_R/ErrorDiscription (depth 5)

CIRCLE LOOP

/LINAC2/UmschaltManager/UmschaltManager/KickerStatusTimeStamp (level 4)



Where to invoke the Tarantula panel?

- > The user can invoke the Tarantula panel from most Java Console applications by selecting from the help menu the entry “Tarantula”:

