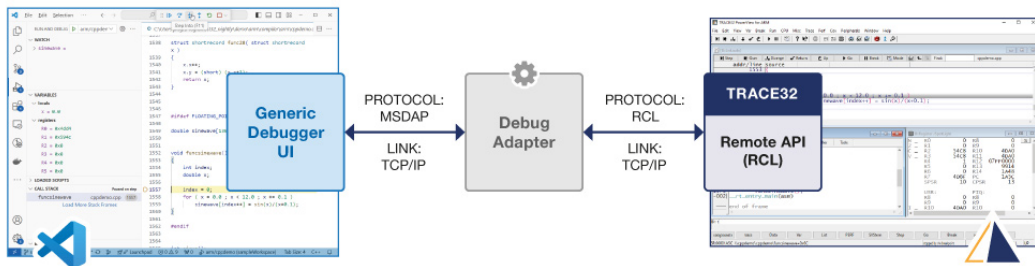


How to use VSCode as Front-End for TRACE32

2025-07-01 - Comments (24) - TRACE32 PowerView

To use Visual Studio Code (VSCode) as a frontend for TRACE32, you can utilize the [Debug Adapter Protocol \(DAP\)](#). Although TRACE32 does not natively support DAP, you can set up a proxy to translate between DAP and TRACE32's Remote API (RCL). This proxy enables VSCode to function as an effective Front-End for TRACE32, facilitating enhanced debugging capabilities.



Usage

1- You need TRACE32 version Nightly from 2024-07-16 (Build 170887 or later) or starting from the DVD R.2024.09

2- Start TRACE32 with API enabled:

- By adding this block to the config file:

RCL=NETTCP

PORT=20000

- Or using the command line option (TRACE32 version Nightly from 2024-07-19 (Build 171009 or later)):

```
--t32-api-rcl=TCP 20000
```

Example: t32marm.exe --t32-api-rcl=TCP 20000 -c config.t32

- Or using the PRACTICE commands (TRACE32 version Nightly from 2024-07-19 (Build 170994 or later)):

SETUP.API.RCL /Interface TCP /Port 20000.

3- Open VSCode

4- Add a configuration in VSCode (Menu → Run → Add Configuration → select empty)

```
{
    // Use IntelliSense to learn about possible attributes.
    // Hover to view descriptions of existing attributes.
    // For more information, visit:
    https://go.microsoft.com/fwlink/?linkid=830387
    "version": "0.2.0",
    "configurations": [
        {
            "type": "node",
            "request": "attach",
            "name": "dapserver attach",
            "debugServer": 58870,
            "cmm": "~/demo/arm/compiler/arm/cppdemo.cmm", //optional
            // "trace32Node": localhost, //IP address
            "trace32Port": 20000 //API port
        }
    ]
}
```

5- Run **t32debugadapter.exe** in cmd line (can be found under ~/demo/env/vscode or can be downloaded from our [website](#)), or check the Tip below

6- In VSCode, go to **RUN AND DEBUG** and start the debug of **dapserver attach** (or just F5)

□ Tip:

You can automatically start the debug adapter (step 5) by using a preLaunchTask:

launch.json:

```
{
```

```

// Use IntelliSense to learn about possible attributes.
// Hover to view descriptions of existing attributes.
// For more information, visit:
https://go.microsoft.com/fwlink/?linkid=830387
"version": "0.2.0",
"configurations": [
  {
    "type": "node",
    "request": "attach",
    "name": "start debug adapter and attach",
    "preLaunchTask": "start_debug_adapter",
    "debugServer": 58870,
    "cmm": "~~/demo/arm/compiler/arm/cppdemo.cmm",
    // "trace32Node": localhost, //IP address
    "trace32Port": 20000
  }
]
}

```

and tasks.json:

```

{
  "version": "2.0.0",
  "tasks": [{
    "label": "start_debug_adapter",
    "command": "start
C:/T32/demo/env/vscode/bin/windows64/t32debugadapter.exe", // adjust
path as needed
    "args": [],
    "type": "shell"
  }]
}

```

□ Tip:

If you have problem using the default port 58870, you can start t32debugadapter with the parameter:

```
t32debugadppter.exe --port=50000
```

Of course, make sure to set this port value to the “debugServer” parameter in the VSCode configuration.

Comments (24)

SB Sepehr Bijani

10 months ago

Hello, Since we are using linux environment for debugging and build, could you provide "t32debugadapter" for linux? BR, Sepehr Bijani

Wiem Wala Benayed

10 months ago

The Linux version will be available soon in our website.

For the moment, I will send it via email.

FC FLAVIO VINCENZO CONDEMI

9 months ago

Can I have the t32debugadapter linux version too?

Wiem Wala Benayed

9 months ago

The Linux and Mac versions are available in our [website](#)

FC FLAVIO VINCENZO CONDEMI

9 months ago

I just checked and I see there is a file in bin/pc_linux64 folder called t32debugadapter. In windows I execute the .exe file (I find it in bin/windows folder). I'm wondering how I can execute this file in Linux. I tried with "source t32debugadapter" command, but I got an error. Do I need to copy and paste the file somewhere else? Thank you in advance

Wiem Wala Benayed

9 months ago

You can simply call it in a terminal with: " <PATH>/t32debugadapter"

KM Kyrylo M

8 months ago

Tried to use this configuration and it fails on launch with following error:

InitializeRequestArguments.__init__() got an unexpected keyword argument 'supportsANSIStyling' My Trace32 version is: TRACE32 for ARM Nightly Build (64-bit) Software Version: N.2024.10.000173431 Build: 173431. I got t32debugadapter.exe from https://repo.lauterbach.com/scripts/misc/env~vscode_/misc-env-vscode_20240921000808_all_files.zip

Wiem Wala Benayed

8 months ago

The error 'InitializeRequestArguments.__init__() got an unexpected keyword argument 'supportsANSIStyling' is now fixed.

Please use the new version (v0.0.7) of t32debugadapter available in our [website](#).

BM Bo Mellberg

8 months ago

Hi! I have the following setup: Linux build system, with Lauterbach setup via USB. Debugging works fine using the Trace32 front-end on Ubuntu. VSCode frontend on Windows laptop, connected to the Linux build system using Remote Host over SSH. This allows me to perform developing tasks easily from home as well as in-office, but the debugging still needs to be done on Ubuntu front-end (via Remote Desktop). How can I use VSCode as a debug front-end on my setup? All I can come up with is running the t32tcpusb on the Linux machine and on top of that run the t32debugadapter.exe on the Windows machine.

Wiem Wala Benayed

8 months ago

You can use the parameters "trace32Node" to set the IP address of the Linux machine. In this case TRACE32 can be started in Linux and VSCode + t32debugadapter in windows. In this case, you may not see the source file as it is located in the Linux machine.

BM Bo Mellberg

8 months ago

I get "ECONNREFUSED 127.0.0.1:58870" when I try that. { "type": "node", "request": "attach", "name": "dapserver attach", "debugServer": 58870, "trace32Node": "10.142.0.139", "trace32Port": 20000 } trace32 is running on the Linux host with RCL=NETTCP and PORT=20000

Wiem Wala Benayed

8 months ago

Please make sure to use v0.0.8 of t32debugadapter

BM Bo Mellberg

8 months ago

"Please make sure to use v0.0.8 of t32debugadapter" Where can I find this? I can't even find the old version 0.0.7 anymore.

Kristoffer Martinsson

8 months ago

<https://repo.lauterbach.com/scripts.html> Search for vscode

P P.Z.

3 months ago

Is there a way to instruct trace32 from VSC to do CD.DO instead of DO only, when using an optional cmm to be loaded? I know I can put CD.DO inside the cmm script but this is not the most convenient way for me. We are running this in a specific system where the debugger HW is on Windows side while the VSC is inside WSL and docker container. Also the path translation option would be nice to have in a future version of t32debugadapter,

Wiem Wala Benayed

2 months ago

Sorry, there is no just option.

You can just include CD <path> in the beginning of your cmm script.

In the VSCode configuration, the path of the cmm must be windows style, as it will be sent via API to the TRACE32 PowerView.

A AT

1 month ago

I get this error with RCL debug adapter v0.0.8, but I can't find any info about it online:

```
C:\T32\demo\env\vscode\bin\windows64>t32debugadapter.exe 2025-05-21 16:27:45,014 -  
lauterbach.msdp - INFO - Lauterbach MSDAP -> RCL debug adapter v0.0.8 2025-05-21  
16:27:47,182 - lautерbach.msdp - INFO - request, initialize 2025-05-21 16:27:47,182 -  
lauterbach.msdp - INFO - response, initialize 2025-05-21 16:27:47,182 - lautерbach.msdp -  
INFO - event, initialized 2025-05-21 16:27:47,182 - lautерbach.msdp - INFO - request, attach  
2025-05-21 16:27:47,243 - lautерbach.msdp - INFO - response, attach 2025-05-21  
16:27:47,243 - lautерbach.msdp - INFO - request, setFunctionBreakpoints 2025-05-21  
16:27:47,243 - lautерbach.msdp - INFO - response, setFunctionBreakpoints 2025-05-21  
16:27:47,247 - lautерbach.msdp - INFO - request, configurationDone 2025-05-21  
16:27:47,248 - lautерbach.msdp - INFO - response, configurationDone 2025-05-21  
16:27:47,249 - lautерbach.msdp - INFO - request, enableNetworking 2025-05-21  
16:27:47,249 - lautерbach.msdp - INFO - response, stopped 2025-05-21 16:27:47,249 -  
lauterbach.msdp - ERROR - system down 2025-05-21 16:27:47,249 - lautерbach.msdp -  
INFO - response, enableNetworking 2025-05-21 16:27:47,250 - lautерbach.msdp - INFO -  
event, stopped 2025-05-21 16:27:47,250 - lautерbach.msdp - ERROR - module '__main__'  
has no attribute 'EnableNetworkingRequest'
```

Wiem Wala Benayed

1 month ago

A new version of t32debugadapter v 0.0.11 is now available in our [website](#).

JC Juhun Choi

1 month ago

Is there a guide to connect multiple Simulators/Cores to the same vscode?

Wiem Wala Benayed

1 month ago

You can add another configuration with different API port value, and before connecting, you select the one that you need to connect to from the list of **RUN AND DEBUG**.

JC Juhun Choi

2 weeks ago

Hello, I have another question about CMM, Is there a way to run CMM on VSCode and check result at VSCode? It would be a big help, since our team uses a lot of CMM Scripts for quick

debugging. Thanks

Wiem Wala Benayed

2 weeks ago

It depends on the type of result. It should be something that VSCode can display. For example, the value of a variable.

Could you clarify what specific result you're trying to obtain?

P P.Z.

2 weeks ago

We gave it a try and with the new version of t32debugAdapter (0.0.11) - it seems to very often hang the trace32 application and it is working very slow, This is was not the case for 0.0.8 - is there anyone experiencing the same?

AK Alan K.

2 weeks ago

I have the same feeling. Version 0.0.8 worked more stable. With newest 0.0.11 whole setup becomes unresponsive very often. It works little better when you collapse VARIABLES preview in VSC but still likes to hang from unknown reason. At the same time, Trace32 enters some strange state requiring to force close it using task manager.