



TRACE32 Arm Debugger Executables And Demo Directory Consolidation

2024-11-27 - Comments (0) - Arm

Consolidation of the TRACE32 demo directories for Arm: `~/demo/arm` & `~/demo/arm64`

The Arm demo directories of TRACE32 have been consolidated as a complementing step to the TRACE32 Arm executable consolidation. The former directory for demo files belonging to 64-bit Arm chips (Armv8 and Armv9) is now integrated into `~/demo/arm`. The directory `~/demo/arm64` is therefore treated as deprecated and got removed.

The removal of the `~/demo/arm64` directory requires users to adjust their custom scripts to be compatible again, if they reference files from this directory. Next to board-specific demos, examples and other helper scripts, TRACE32's architecture-specific demo directories also contain scripts and files required for flash programming and OS awareness. **Therefore, it is expected that especially users of TRACE32's flash programming and OS awareness features will be affected.** Check section [How to Adjust File References](#) for details.

Existing Arm demo directories will either be outdated when updating via a TRACE32 interim version or no longer available in installations obtained via the TRACE32 Updater or Installer. To avoid issues, check the information about TRACE32 updates containing the new demo structure described in [TRACE32 Software Update](#).

Available Since

Interim/Nightly release:

The rollout of the consolidated TRACE32 demo directories for the Arm architecture started on 13th August 2021 with software version N.2021.08.000138391.

DVD release:

The first DVD release that contains the consolidated TRACE32 demo directories for the Arm architecture is 09/2021.

Major Changes

- `~/demo/arm` now contains all previously available demo files for 32-bit and 64-bit Arm based chips
- `~/demo/arm64` for 64-bit Arm chips is deprecated and is being removed. All its former contents are integrated into `~/demo/arm`

- The PRACTICE function **OS.PresentDemoDirectory()** now always returns
`~/demo/arm` with TRACE32 for Arm

How to Adjust File References

This text uses the `~/` notation where the two tildes are interpreted by PowerView as the TRACE32 system directory, also known as the installation directory. Lauterbach recommends the usage of `~/` in custom scripts to be independent of a particular installation or host operating system. For the same reasons, Lauterbach encourages the usage of **OS.PresentDemoDirectory()** to reference the architecture demo directory.

However, users should be aware that the mentioned directories might also be referenced differently in their scripts, e.g. via absolute or relative paths.

~/demo/arm64 (For 64-bit Arm Chips: Armv8 & Armv9)

The major consequence of the applied demo directory changes is that references to `~/demo/arm64` are no longer valid. Users that reference files of the `~/demo/arm64` directory within their custom scripts will need to adjust their scripts to be compatible again. To notify users about the changes, TRACE32 PowerView will show a notification pop-up at start when the deprecated `~/demo/arm64` directory is detected.

Lauterbach recommends choosing one of the following two solutions to adjust scripts:

- **Solution 1:** Exchange `~/demo/arm64` with `~/demo/arm`
- **Solution 2:** Exchange `~/demo/arm64` with "PRACTICE macro and `OS.PresentDemoDirectory() [OS.PDD()]`"

Compared to Solution 1, Solution 2 ensures that custom scripts will stay compatible to older TRACE32 software versions, where **OS.PDD()** returned the correct demo directory path based on the selected Arm chip.

Examples:

Old:

```
TASK.CONFIG C:\T32\demo\arm64\kernel\freertos\freertos.t32
TASK.CONFIG ~/demo/arm64/kernel/freertos/freertos.t32
```

New: Solution 1

```
TASK.CONFIG ~/demo/arm/kernel/freertos/freertos.t32
```

New: Solution 2

```
PRIVATE &demo
&demo=OS.PresentDemoDirectory() ; Alternative short form:
&demo=OS.PDD()
TASK.CONFIG "&demo/kernel/freertos/freertos.t32"
```

Aside from the main adjustments, for a very small number of subdirectories and files, the internal structure has slightly changed for a smooth integration into their ~/demo/arm counterpart. References to such files or directories will have to be updated as well. Please create a [new support ticket](#) if you cannot locate a specific file any more.

~/demo/arm (For 32-bit Arm Chips: Armv7 & Cortex-M & Other)

Users that reference files of the previous ~/demo/arm directory within their custom scripts will very likely be not affected by any of the demo directory changes.

Exceptions are references to a very small number of subdirectories and files for which the internal structure has slightly changed to allow for a smooth integration of the 64-bit Arm demo files. References to such files or directories will have to be updated as well. Please create a [new support ticket](#) if you cannot locate a specific file any more.

Important Information for TRACE32 Flash and OS Awareness Users

Flash directory: flash

OS awareness directories: kernel & bootloader

The flash binaries as well as the OS awareness files have been enhanced to support all Arm architecture variants which were previously supported by their respective files. Therefore, users of the flash and OS awareness functionality no longer need to distinguish between files for 32-bit and 64-bit Arm chips.

An important note is that because of their new format, the new flash and OS awareness files are no longer compatible with TRACE32 software versions prior to N.2021.08.000138391. However, old files of previous TRACE32 versions will continue to work with new TRACE32 software.

TRACE32 Software Update

The required changes for the consolidation will lead to restructuring or renaming of certain directories or files. Because of that, the demo directories might end up in an inconsistent or conflicted state if a TRACE32 software update is not applied correctly. Two update methods need to be distinguished.

TRACE32 Updater

The preferred method for updating an existing TRACE32 installation to the demo directory changes is with an update via the TRACE32 Updater, version 09/2021 or later. The TRACE32 Updater will automatically back up the user installation (including local modifications) and afterwards replace the old demo directory with the new one to achieve a consistent installation.

Interim/Nightly Updates

If a user receives an interim update, it is advised to first use the TRACE32 Updater for the DVD release 09/2021 or later which will clean up the existing installation. If that is not possible, users should first back up and then delete or rename the affected directories to be

able to achieve a consistent installation and avoid unintended merging of the old and new directories. Afterwards, the interim update can be applied by following the usual interim update instructions.