ANSYS ACT 2020 R1 Migration Notes

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As improvements are made to ACT APIs and the way that they display and transmit data, great efforts are taken to ensure that changes are backwards-compatible. For your convenience, this document lists 2020 R1 API changes that might impact your existing extensions so that you can determine if any action is necessary before migrating them.

Note:

- This document might contain entries that do not appear in "Migration Notes" in the *ACT Developer's Guide.*
- For migration notes specific to Mechanical APIs, see "Mechanical API Migration Notes" in the *Scripting in Mechanical Guide*.

InvokeUIThread

In Mechanical, the callbacks `OnSolve`, `OnGenerate`, `Evaluate`, and `GetCommands` are now run on the UI thread by default. A new attribute, `InvokeUIThread`, is exposed on the tags of these callbacks. Setting `InvokeUIThread` to `False` will bring back the previous behavior of running the callback on a separate background thread. The main advantage of running a callback on a background thread is to keep the user interface responsive during the execution of the callback. However, the behavior change was made to avoid several crashes and instabilities that occur when running arbitrary code on a background thread. You can still offload some work safely to a background thread even when `InvokeUIThread` is set to `True`. For more information, see the "Threading" topic in the *Scripting in Mechanical Guide*.

Change to callbacks executed during design point and project updates for Mechanical extensions

For Mechanical extensions, the callback `onTerminate` now executes in batch mode, including during design point and project updates. Update your Mechanical extensions accordingly. Use the property `Hidden` via `ExtAPI.Application.Hidden` to check whether Mechanical is running in batch mode.

Note: ACT has superseded the ANSYS Workbench Software Development Kit (SDK) and External Connection Add-In as the best-in-class tool set for customizing ANSYS products. Support for the SDK and External Connection Add-in has ended as of 19.0. If you have used these deprecated tools for Workbench customizations, on the App Developer Resources page, the **Help & Support** tab displays a link to the *SDK and External Connection Migration Guide*.