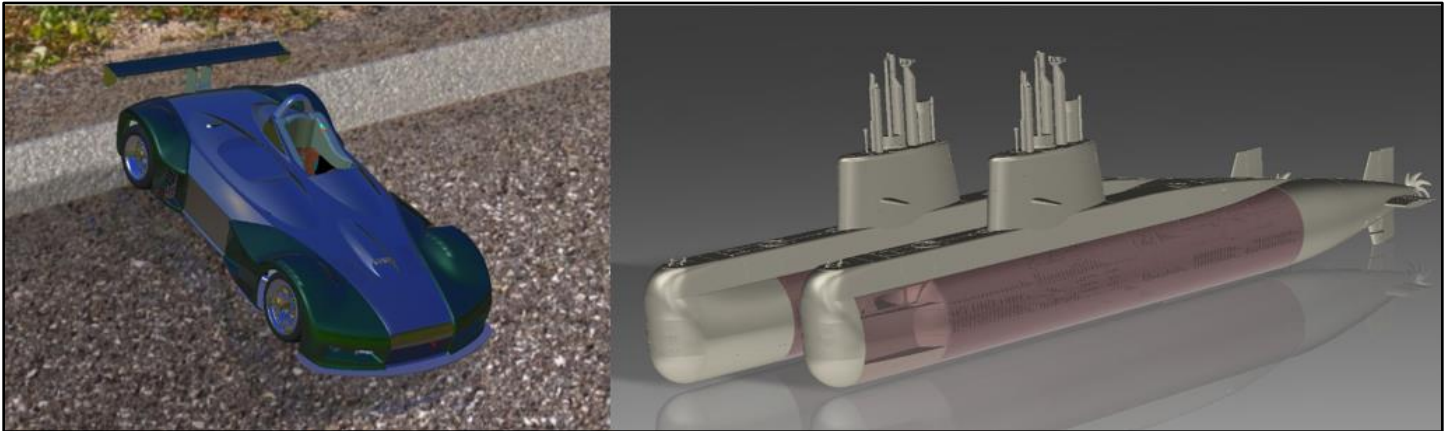


SPECapc™ for Creo™ 9 Benchmark Run Rules



The SPECapc for Creo 9 benchmark is a performance evaluation software for vendors and users of systems running PTC Creo 9.0 software.

The benchmark consists of eight tests (three CPU and five graphics tests) that exercise various aspects of system performance when running the popular product design application. It features two models – Worldcar and Submarine. Composite scores are generated for graphics and CPU performance. The graphics-oriented tests use these view settings - shaded, shaded-edged, shaded reflection, hidden-line, and no-hidden-line graphics and the CPU tests measure these workflows – regeneration, retessellation, mass properties analysis, CPU rendering using Render Studio and IGES import/export.

Scoring for the benchmark is based on a reference machine, with

- CPU: Intel(R) Xeon(R) Silver 4110 CPU @ 2.10GHz (1 Socket, 8 cores, 16 logical processors)
- Graphics Card: Quadro P4000
- OS: Windows 11 Enterprise 21h2 22000 UEFI
- Display Resolution: 1920x1080
- Creo App: Version 9.0.4.0, Anti-aliasing=Enabled(8x)

The results from a benchmark run are compared to the reference results. A larger score is a better score.

This document outlines the system requirement, initialization, and execution steps required for a rules-compliant run of the benchmark.

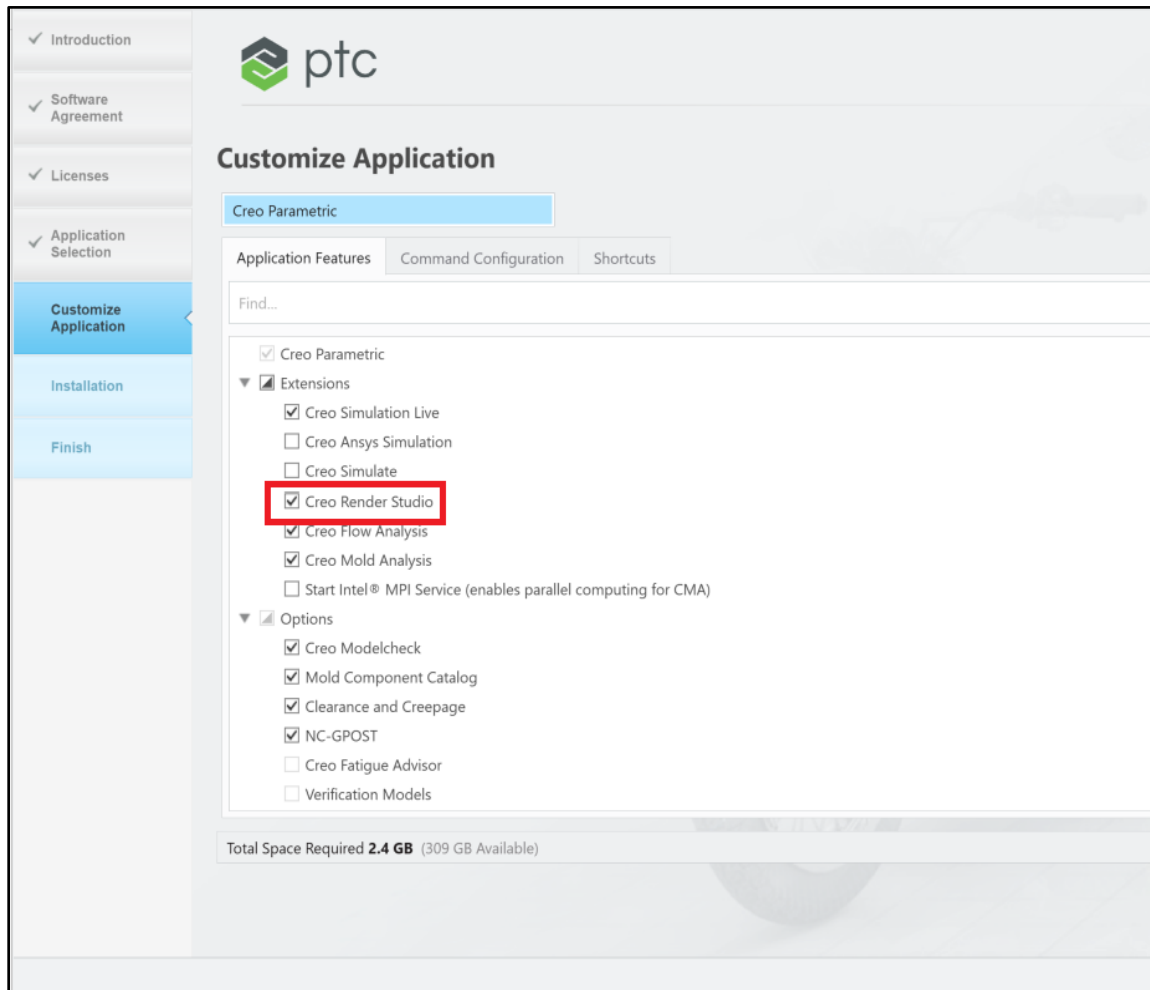
Benchmark Requirements

System

- Microsoft Windows 10 or 11 64-bit as supported by PTC Creo 9.0
- Windows Display scaling set to 100%
- Minimum 1920 x 1080 display resolution
- Minimum 16GB of system memory
- Graphics card as supported by PTC Creo 9.0.

Application

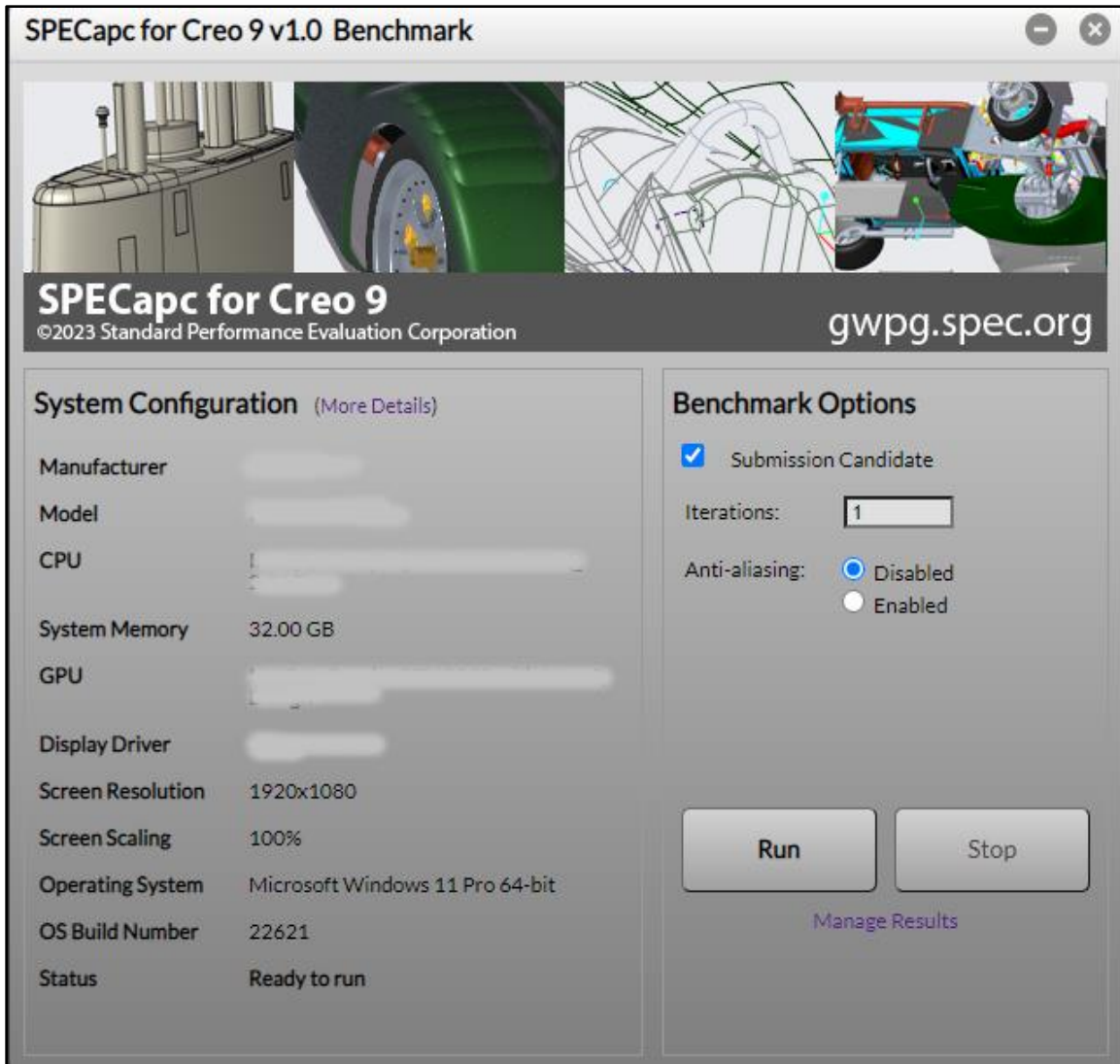
- Fully licensed PTC Creo 9.0 software.
 - Creo version 9.0.4.0 is required for results submission to SPEC.
 - The default license configuration can sufficiently run the benchmark. Ensure that **“Creo Render Studio”** is selected in the *Application Features* tab during installation.



- The benchmark may not use any other config.pro, config.sup, config.win, menu_def.pro, or protk.dat files. These files must be removed from your application install location and user folder before running the benchmark.

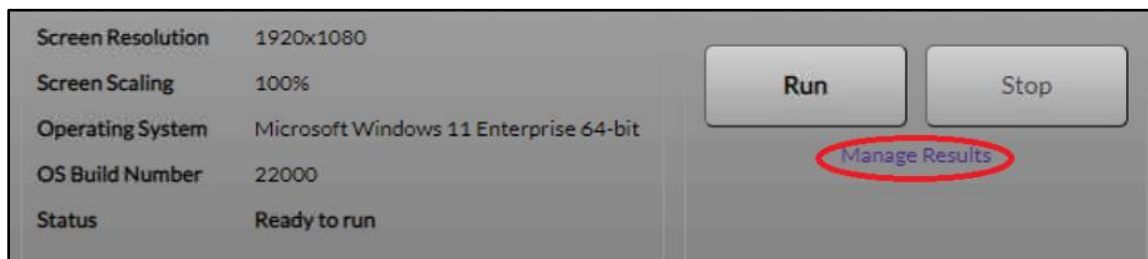
Benchmark Execution

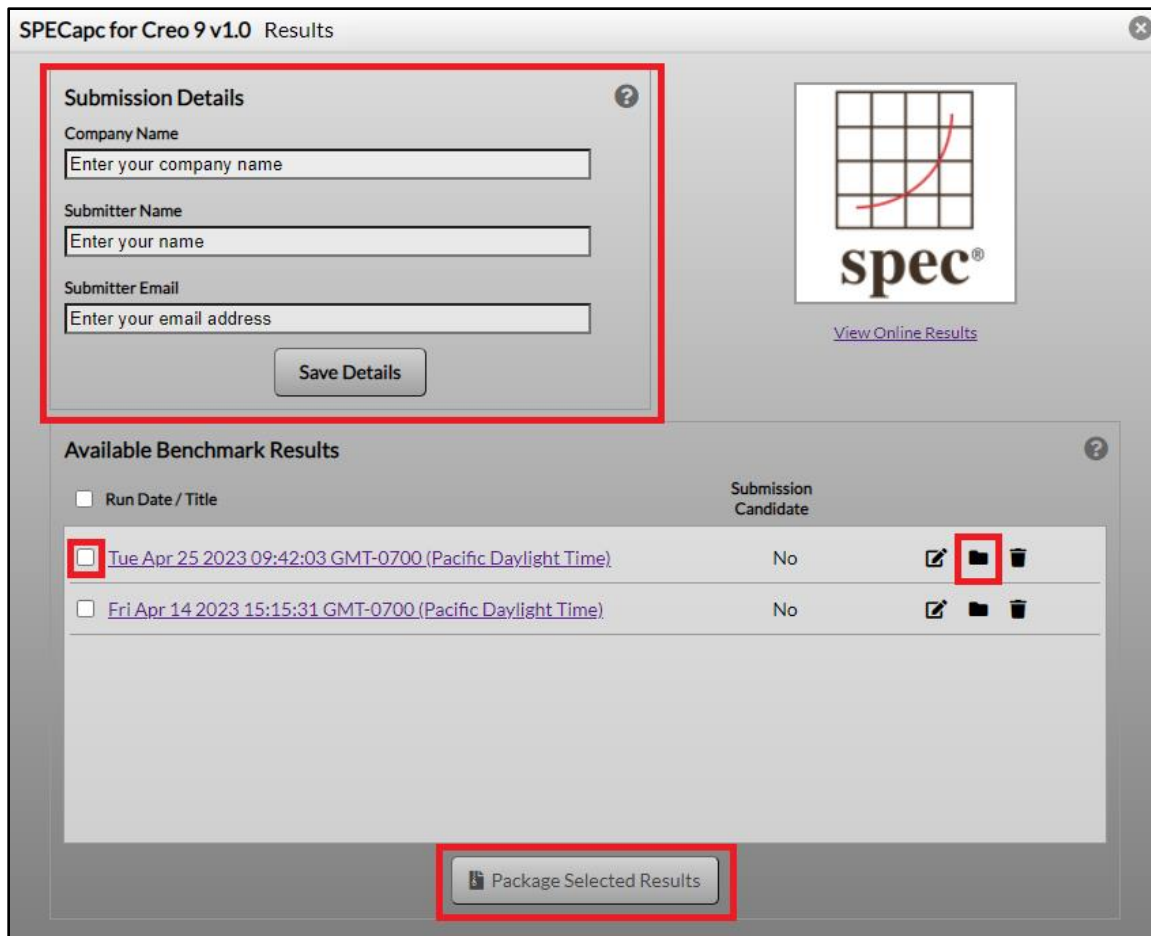
1. From the Start menu, select:
*Start -> SPECcapc -> **SPECcapc for Creo 9***
2. This will bring up the benchmark interface.
 - If the system and app configuration meet the requirements for submission, the submission candidate will be checked by default.
 - The user can choose the anti-aliasing setting as well as increase the iterations value if the benchmark is to be run multiple times.
3. Click **Run**.
4. If the benchmark was run once, a results HTML will be displayed. If multiple iterations were run, a results manager window will be displayed showing all the available results.



Benchmark Results

- Results from previous runs of the benchmark are stored in individual sub-directories at:
"%USERPROFILE%\Documents\SPEC Results\SPECapc for Creo 9\ "
- This directory can also be found by selecting "**Manage Results**" within the benchmark UI and then clicking the folder icon next to a listed result.





Submission

Benchmark results can be submitted for review and publication on the SPEC (Standard Performance Evaluation Corporation) website. Submission requires the benchmark to be run using PTC Creo 9.0.4.0 version. When submitting results for review, they should be packaged in a specific format. Properly formatted packages can be automatically generated in the Results Manager window by selecting “Manage Results” within the main benchmark UI.

1. Complete the “**Submission Details**” section.
2. Check the box next to the desired results and select “**Package Selected Results.**”

If manually creating a submission package, please ZIP the results directories in the following directory structure:

```
./company-name/system-1/Creo9/results-directory/  
./company-name/system-2/Creo9/results-directory/  
./company-name/system-3/Creo9/results-directory/
```

The ZIP file should be named company-name_apcCreo9_v0.zip, where company-name is the name of the member company or organization.
