SIEMENS

Simcenter 3D 2020.1 Series update

Welcome to Simcenter 3D

March 2020

Dear Customer:

We are proud to introduce the latest release Simcenter 3D 2020.1 v1911 of our product development solution. With this release, we continue to provide innovative ways to deliver solutions that meet the next generation of your product design, development, and simulation challenges. The new version of Simcenter 3D is robust and powerful, and it delivers advanced technologies for product design, development, and simulation in a single, multidisciplinary platform. It preserves best-in-class customer deployment readiness and builds on the productivity and stability achievements of the previous release.

Sincerely,

Simcenter 3D Release Team

CONTENTS

SIMCENTER 3D 2020.1-1911

2020.1-1911 UPDATES

2020.1-1911 FIXED PROBLEM REPORTS (PR)

Please see the table below for a summary of the PR updates included in this release.

Application	Count of PR Number
SIMCENTER 3D	20
KDA	5
ASSEMBLIES	4
AUTOMATN_DESIGN	2
SYSENG	2
NASTRAN	2
CAM	1
GATEWAY	1
ROUTING_GENERAL	1
DESIGN	1
NXMANAGER	1
PMI	1
Total	**41**

For a cumulative list of PR fixes, see Fixed_Problem_Reports.csv included with the release documents.

2020.1-1911 ENHANCEMENTS (ER)

Please see below for a list of enhancements included in this release.

SIMCENTER 3D 2020.1-1907

2020.1-1907 UPDATES

Simcenter 3D 2020.1-1907 Caveats

Bolt Connection Element Error

An error will be raised upon attempting to create a Bolt Connection Element from the Connection Element Manager dialog under these conditions.

1. A new FEM/AFM file is created and saved in Simcenter 3D 2020.1 version 1907 and it is opened in Simcenter 3D 2020 version 1899
2. A Bolt Connection element is created in Simcenter 3D 2020.1 version 1907 FEM/AFM file, when opening the file in Simcenter 3D 2020.1 version 1899, editing the Bolt Connection Element can trigger the error and obstruct the edit operation

The influence of the errors raised in the above-mentioned cases on further operations in the Simcenter 3D is not known, so for safety reasons it is recommended to close the session and reopen Simcenter 3D after the error is triggered.

2020.1-1907 FIXED PROBLEM REPORTS (PR)

Please see the table below for a summary of the PR updates included in this release.

Application	Count of PR Number
SIMCENTER 3D	22
DRAFTING	5
KDA	5
CAM	4
ROUTING_GENERAL	2
SYSENG	2
NASTRAN	2
NX_SHEET_METAL	2
VOLUME	1
TRANSLATOR	1
SHIP_DESIGN	1
PCB_EXCHANGE	1
Total	**48**

For a cumulative list of PR fixes, see Fixed_Problem_Reports.csv included with the release documents.

2020.1-1907 ENHANCEMENTS (ER)

No enhancements were included in this release.

SIMCENTER 3D 2020.1-1904

2020.1-1904 UPDATES

2020.1-1904 FIXED PROBLEM REPORTS (PR)

Please see the table below for a summary of the PR updates included in this release.

Release	PR Number	Description	Application	Function	Sub_Function
1904	8441216	Internal error when using delete template	AUTOMATN_ DESIGN	PAGE	BASIC_CAAPABILIT

For a cumulative list of PR fixes, see Fixed_Problem_Reports.csv included with the release documents.

2020.1-1904 ENHANCEMENTS (ER)

There are no enhancements included in this release.

SIMCENTER 3D 2020.1-1903

2020.1-1903 UPDATES

2020.1-1903 FIXED PROBLEM REPORTS (PR)

Please see the table below for a summary of the PR updates included in this release.

Application	Count of PR Number
SIMCENTER 3D	21
CAM	15
KDA	13
SYSENG	10
NX_SHEET_METAL	5
ASSEMBLIES	3
CMM_INSPECTION	3
ROUTING_GENERAL	3
SHIP_DESIGN	3
TC_FEATURES	3
DESIGN	2
NXMANAGER	2
CORRUPTED_PARTS	1
DRAFTING	1
FLEXIBLE_PIPE	1
MECHATRONICS	1
NASTRAN	1
TRANSLATOR	1
Total	**89**

For a cumulative list of PR fixes, see Fixed_Problem_Reports.csv included with the release documents.

2020.1-1903 ENHANCEMENTS (ER)

Please see below for a list of enhancements included in this release.

- ER8562281 - Enhancement Request for Simcenter 3D Motion TWR

Introduction

Importing All KEYOPTs as User Defined KEYOPTs

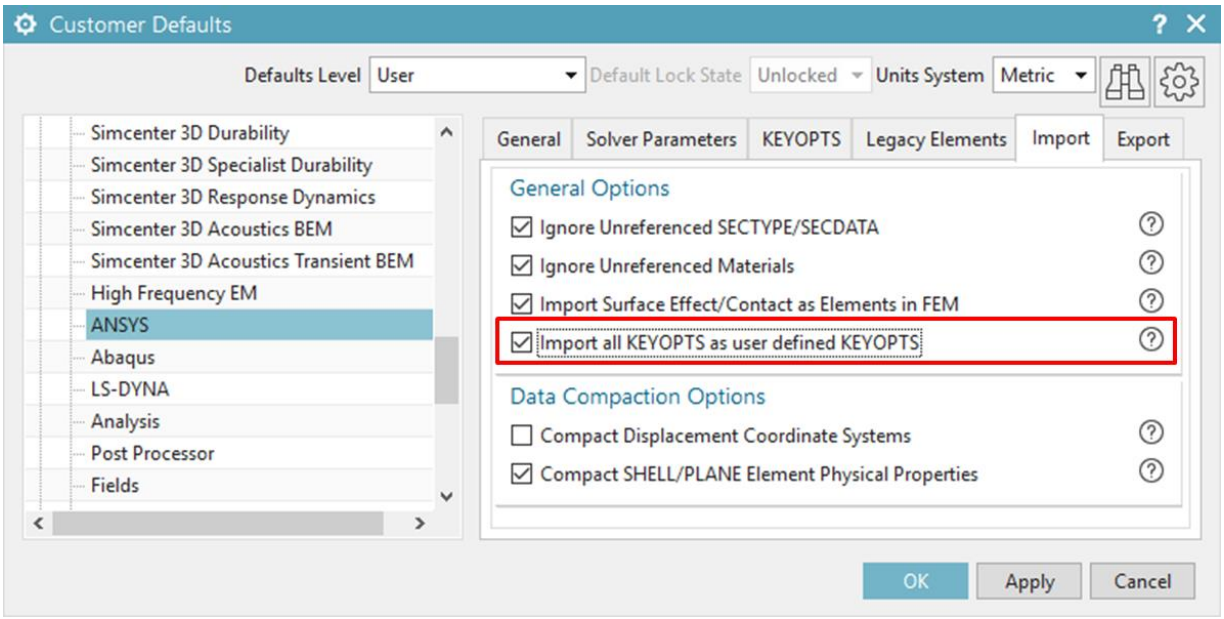
Many ANSYS element types have key options (KEYOPTs) that you can specify. Each KEYOPT is identified by its number and may have different values. For example, in ANSYS version 19.1, SHELL181 has 7 KEYOPTs: KEYOPT (1), (3), (5), (8), (9), (10) and (11). The value of KEYOPT (3) could be 0 or 2. The KEYOPT numbers and its values are defined in the XML. They can be changed, removed or added in ANSYS from release to release.

When a specific KEYOPT is supported by Pre/Post, but one of its values is unsupported, this value is lost on import, and Pre/Post uses the default value instead. You can now select a new Customer Default, “Import all KEYOPTS as user defined KEYOPTS”, to ensure that unsupported KEYOPT values are imported.

Accessibility

You can select this new option from the Customer Defaults dialog box as follows: Customer Defaults → Simulation → Pre/Post → ANSYS → Import →General Options (see the image).

Image: Toggle of “Import all KEYOPTS as user defined KEYOPTS” in Customer Defaults



Import behavior

How Pre/Post imports KEYOPTs in an ANSYS input file depends on whether the new customer default is selected:

- When the new default is turned off, Pre/Post imports KEYOPTs into Pre/Post as in previous releases.
- When the new default is selected, Pre/Post imports all KEYOPTs as User Defined KEYOPTs.

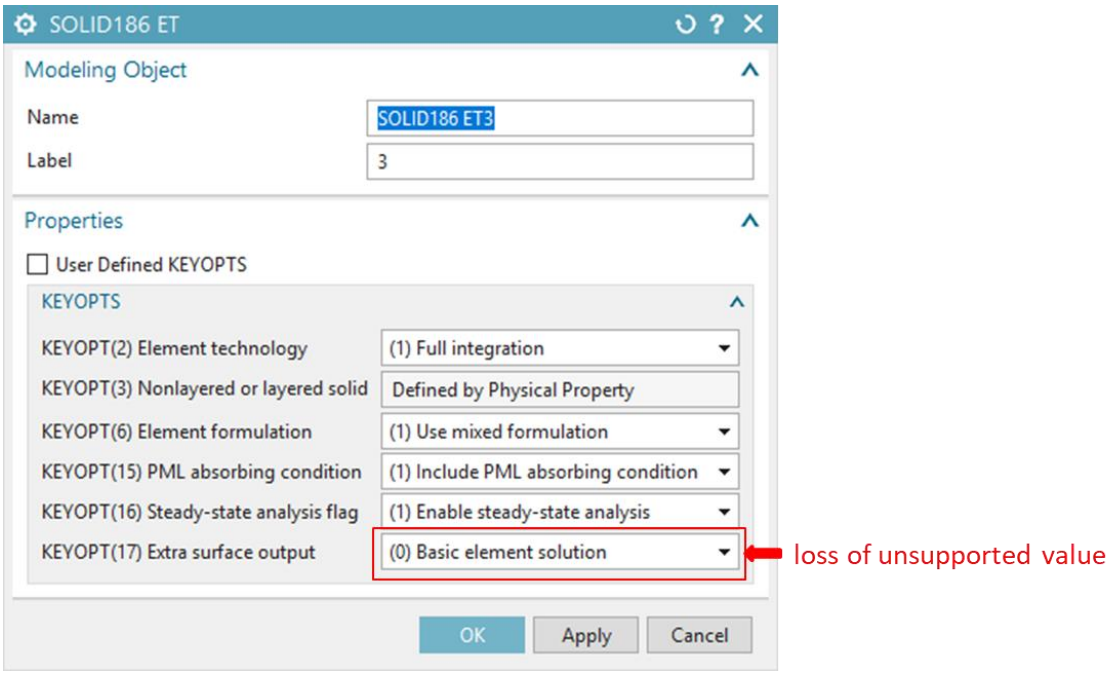
The following images illustrate these two behaviors:

Image: KEYOPTs numbers and values example for SOLID186 with an unsupported value in the input file

```
/COM, Solid(1)::3d_mesh(1)
ET,        3, SOLID186, ,        1, , , ,        1
KEYOPT,        3,       15,        1
KEYOPT,        3,       16,        1
KEYOPT,        3,       17,        4
/COM
```

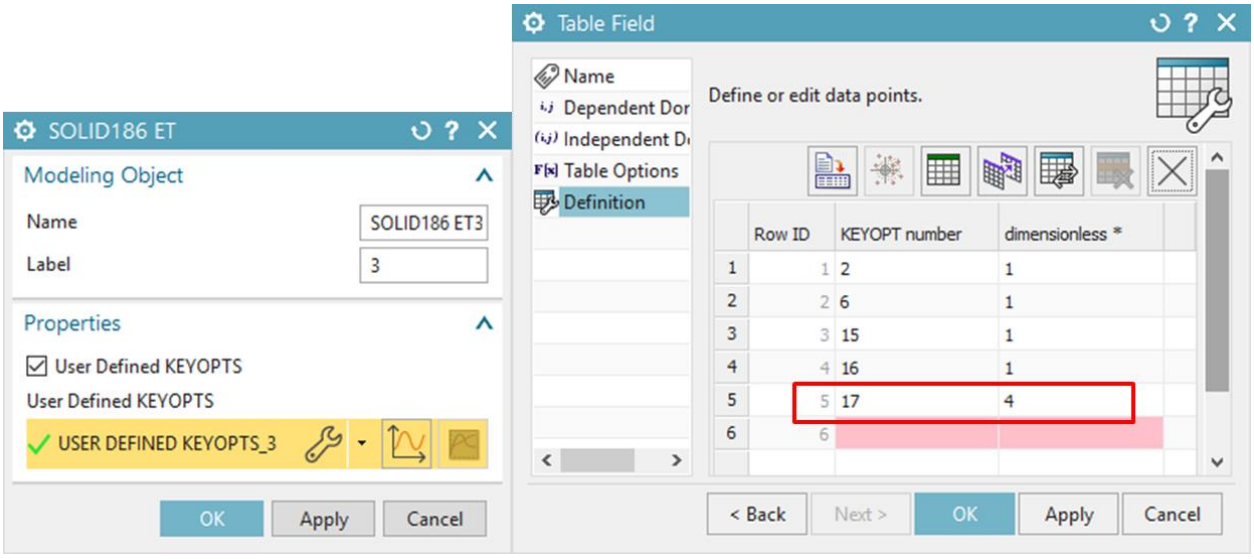
unsupported value

Image: SOLID186 ET modeling object with the loss of unsupported value when the customer default is turned off



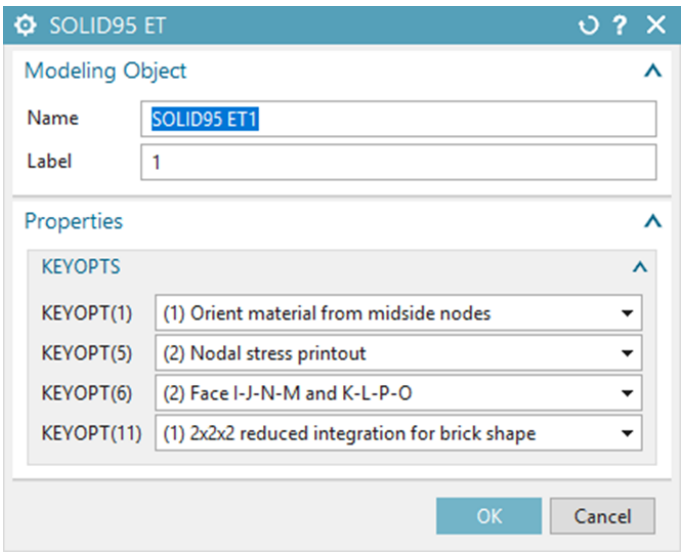
loss of unsupported value

Image: SOLID186 ET modeling object when the customer default is selected



Note: This support applies to all element types accept the Legacy Elements that are not supported as user defined KEYOPTS. The Legacy Elements are BEAM4, BEAM44, LINK8, LINK10, CONTAC12, CONTAC52, PLANE42, PLANE82, SHELL63, SHELL57, SHELL91, SHELL93, SHELL99, SOLID45, SOLID92, SOLID95, SOLID191. Pre/Post always imports the KEYOPTs for these Legacy Elements as standard KEYOPTs regardless the status of the new default.

Image: SOLID95 ET modeling object (Legacy Element)



SIMCENTER 3D 2020.1 SERIES PRS WITH ISSUED SOFTWARE FIELD BULLETIN (SFB)

SFB	SFB Short Description	PR	PR Status	PR Fixed Version
SFB-Simcenter-8016272	Nodal Force Report is incorrect if reference CSYS is cylindrical or spherical	9597058	Fixed	v1903
SFB-Simcenter-8016273	SOL402 parabolic plane strain elements display wrong results at mid-side nodes	9581295	Fixed	v1903
SFB-Simcenter-8016733	Issue with shell composite elements in SOL402	8413746	Fixed	v1907
SFB-Simcenter-8016735	Issues with Bolt pre-load results for SOL402	9622841	Fixed	v1903
SFB-Simcenter-8016934	Issue with Post Processing Combination command for Elements with "no results"	9637335	Fixed	v1903
SFB-Simcenter-8016952	Issue with Moments computed for Free Body Diagram and Nodal Force Report	8436289	Fixed	v1903

SIMCENTER CUSTOMER SUPPORT

Installation assistance

For additional installation assistance, or to report any problems, contact the Simcenter Customer Support.

Website:
http://support.industrysoftware.automation.siemens.com/gtac.shtml