

Simcenter Nastran 2020.1 Release Notes

Contents

Simcenter Nastran 2020.1 release notes	1-1
Simcenter Nastran 2020.1 caveats	2-1
Simcenter Nastran 2020.1 Problem Report (PR) fixes	3-1
Simcenter Nastran 2020.1 operating system requirements	4-1

Chapter 1: Simcenter Nastran 2020.1 release notes

This document includes software caveats, the fixed Problem Reports (PRs), the supported operating systems, and the references below to the installation instructions.

Software installation

The installation instructions for the software are in **software_install.pdf**, which is included at the top level of the installation media.

Documentation installation

The Simcenter Nastran documentation is available on [Doc Center](#), so you do not need to install it.

If you decide to install the Simcenter Nastran documentation, you will need to install the SPLMSOLRSERVER and SPLMDOCSEVER web servers included with the documentation installation. These are small, self-contained web servers that run as the services 'Siemens PLM Documentation Server' and 'Siemens PLM Solr Server'.

The installation instructions for the documentation are in **documentation_install.pdf**, which is included at the top level of the installation media.

License information

You must use the Siemens PLM License Server. The installation instructions for the license server are in **SPLM_Licensing_Install.pdf**, which is included at the top level of the installation media. The licensing user's guide **SPLMLicensing_user_guide.pdf** is also included. In addition, you will need to contact GTAC and obtain a new license file or download it from the [GTAC support site](#).

For GTAC in the United States or Canada, call 800-955-0000 or 714-952-5444.

If you are outside the United States or Canada, contact your local support office.

To install the license server on Windows, you can either run **Launch.exe**, or run the setup program contained in the FLEXIm directory.

To install the license server on Linux, you run the setup program **SPLMLicenseServer_XXXXX_linux_setup.bin**, which is contained at the top level of the installation media.

Distribution media contents

The installation contains these commonly used Windows files.

File Set	Description
Launch.exe	Launches installation utility
\Nastran	Directory containing Nastran file sets and InstallShield Wizard
SPLM_Licensing_Install.pdf	License server installation instructions
SPLMLicenseServer_XXXXX_win64_setup.exe (in the /FLEXIm directory)	License Server Install
software_install.pdf	Software installation instructions

File Set	Description
documentation_install.pdf	Documentation installation instructions

The installation contains these commonly used Linux files:

File Set	Description
nastransetup	Installation utility
scnas/	Directory containing Simcenter Nastran file sets
tools/	Directory containing installation utilities
SPLM_Licensing_Install.pdf	License server installation instructions
SPLMLicenseServer_XXXXX_linux_setup.bin	License Server Installation
software_install.pdf	Software installation instructions
documentation_install.pdf	Documentation installation instructions

Chapter 2: Simcenter Nastran 2020.1 caveats

Simcenter Nastran - General issues

- The directory containing C files example for User Material is incomplete. A separate download is made available on GTAC. Fortran directory is complete.
- (PR 9562643) In linear solution sequences, if the boundary nodes of the defined bolt cut are part of a glue pair, the axial preload is not correctly applied. This can be determined by summing the reaction forces at the bolt head which should equal the full preload value. Using a contact definition instead of glue, when possible, will resolve the issue.
- (PR 9343915) For SOL 144 analyses that calculate aerodynamic hinge moments using MONPNT1, some loads may be incorrect.
- (PR 9598270) RDMODES gives the wrong set of eigenvalues when SWAP RDQSOL is selected either manually or automatically, and F1, F2, and ND are all specified. A workaround is using 'LANC' for RDQSOL.
- (PR 9472874) For buckling problems, when a large ratio on the factor diagonal is indicated via user warning message in F06, the Lanczos procedure may fail due to a very large shift.
- (PR 9095229) For eigenvalue computations using Lanczos procedure, specifying a negative value for F1 may result in a failure if there are also large ratios on the factor diagonal. The workaround is to either not specify lower frequency F1, or specify zero.
- (PR 9533340) In dynamic analysis, the modal data generated by SDR1 and SDR2 are formed into a data matrix by DDRMM. For large models, Nastran may run out of scratch disk space in SDR2 module. Using PARAM, DDRMM, -1 will use less disk and let the solution continue.

Simcenter Nastran - Vibroacoustic analysis issues

- (PR 9619265) For SOL 108 vibroacoustic analyses that request grid contribution output, contributions may be ordered incorrectly if distributed memory parallel (DMP) processing is used.
- (PR 9614164) SOL 111 vibroacoustic models using RLOADEX to specify loads can fail for very large numbers of loads. Specifically, this may occur when the associated SC_H5 load file is more than 100 GB.
- (PR 9612495) FEMAO quality check will output incorrect results when DMP processing is used and initial quality check is turned off.
- (PR 9557338) In vibroacoustic analyses using HFEM, when GFL is applied the solution is slower than in 2019.1. A workaround is to switch to previous version by using SYS714=1.
- (PR 8422803) For vibroacoustic analyses using FEMAO (ACADAPT) and DMP processing, there may not be enough memory assigned to NASTRAN by default. This can result in an error, and

an incorrect error message that does not indicate memory shortage. A workaround may be to increase Nastran memory using the `memorydefault` keyword.

- (PR 8559234) For vibroacoustic analyses using HFEM, processing may be slow compared to Virtual Lab.

Simcenter Nastran - Solution 200 Design Optimization

- (PR 8434468) For SOL 200 topology and topometry optimization jobs, stress sensitivities might be inaccurate if several stress responses (e.g. with different item codes) are defined on the same elements.
- (PR 8434471) For SOL 200 topology optimization jobs including maximum size manufacturing constraint, best design selection might be incorrect. It is advised to use `PARAM,NASPRT,1` such that all iteration are output to `op2` file and to manually inspect the results.

Simcenter Nastran - Solution 401

- (PR 9591525, PR 9586230) After performing SOL 401 large strain analyses, strain/stress results are incorrectly shown as having zero value in contour plots in Simcenter Post. In order for this to work, Post needs TRMBD data block (table of Euler Angles for transformation from material to basic coordinate system in the deformed configuration) to plot the strain/stress results in the basic coordinate system. But SOL 401 large strain analysis does not generate the correct TRMBD data block. The work-around is to select the Native coordinate system in Post to show the results correctly.
- (PR 9618559) In SOL 402, the equivalent stress for cast iron plasticity is correctly evaluated as the effective (von Mises) stress of the stress tensor for all material types, whereas SOL 401 is not consistent. For a large strain analysis in SOL 401, the equivalent stress is incorrectly output as the yield stress either under compression or tension.
- (PR 9553417) In a SOL 401 multi-physics input file which contains SPCD and individual loads (FORCE, MOMENT, PLOAD4, etc.) with same SID for these cards, the SPCD contribution is not applied, resulting in an incorrect solution. A workaround is to apply the individual loads using a LOAD combination bulk data card with SID same as that of the SPCD. This is not an issue with non-multi-physics input files.
- (PR 9615244) In SOL 401, when an ANALYSIS=DYNAMICS subcase follows a ANALYSIS=PRELOAD subcase, the effect of the preload is not carried through correctly. The workaround is to use ANALYSIS=STATICS when applicable.
- Following limitations exist in SOL 401 when PLOADFP is used in a model:
 - o Forces on SPC degrees of freedom are not part of OLOAD output.
 - o In defining a WETID region, BCPROP and BCPROPS are not supported. Only BSURF, BSURFS and BEDGE are supported.
- Following limitations exist in SOL 401 when a model containing contact definition is used in a restart analysis:

- o When contact region adjustment (BCTPARAM, ADJUST >=0.0) is requested, the adjusted coordinates are not considered in the restart subcase. The model check will fail in the restart solution. The following DMAP ALTER may be used as a work around to fix this issue:

```
compile ifps,list $
alter 'IF (ISYS709\>=1 AND ISYS710=SBCNO) RST401 = TRUE' $
RST401 = FALSE $
endalter $
```

- o The restart solution with small sliding formulation (BCTPARAM, DISP=1) may fail to converge because of incorrect initialization of contact parameters in the restart solution. The following DMAP ALTER may be used as a work around to fix this issue:

```
compile nonlin,list $
alter 'cntupdtr' $
cntupdtr=1 $
endalter $
```

- (PR 9609676) In a SOL 401 cyclic symmetric analysis (ANALYSIS=CYCMODES), when user defined cylindrical and cartesian coordinate systems are specified, the cartesian coordinate systems need to have a larger coordinate system ID than that of the cylindrical coordinate system.
- When NLCNTL, RFVAR=FORCE is used in a SOL 401 input file, any TABLEDn associated with the corresponding RFORCE load will not support EXTRAP=2; only EXTRAP=0 and EXTRAP=1 are supported.

Simcenter Nastran - Solution 402

- (PR 8434017) In SOL402, the bolt results bending moments are not accurate if the bolt mesh is not symmetric because they are evaluated around the average of the nodes of the bolt cut instead of its center of area. However, this is just a post processing issue and does not the accuracy of other results.
- (PR 8434030) In SOL402 model using MAT9, if G1Z and G2Z are not specified, a value of 0 is used instead of infinite as stated in the documentation. This can lead to singular stiffness matrix. As a workaround, use 1000 times the value of G12.
- (PR 9620442) In SOL 402, the NLCNTL2 parameters:
 - o CREEP and PLASTIC cannot be enabled locally (in a subcase) if they were disabled globally,
 - o AUTOTIM cannot be disabled locally (in a subcase) if it was enabled globally, which is the default.

As a workaround, do not disable CREEP or PLASTIC globally, but instead, do it in each subcase where necessary. Also, disable AUTOTIM globally and enable it in each subcase where necessary.

- (PR 8433148) With SOL402, when PLOAD2 bulk cards are referenced by a global DLOAD case control card or DLOAD case control cards in several subcases, the load is multiplied by the number of subcases in which it is used. As a workaround, use different PLOAD2 bulk card in each subcase or use LOAD instead of DLOAD.

- (PR 9610335) In SOL402, it is not allowed to have multiple RFORCE1 on the same element or a combination of RFORCE and RFORCE1 but this was not trapped.
- (PR.8431853) In SOL402, when using a large number of subcases and several DLOAD, an error can occur during computation leading to the error message: forrtl: error (65): floating invalid. As a workaround, reduce the number of subcases or replace DLOAD by LOAD.
- (PR 9594936) With SOL402, contact with a rigid surface was not producing accurate results. As a workaround, use a flexible surface with large stiffness.
- (PR 9589796) With SOL402, SHLTHK parameter does not work for composite shell contact pair.
- (PR 8429058) With SOL402, BCTPAR2 INIPENE 12 (UN3 2) parameter doesn't apply only on penetration but behaves similarly to INIPENE 11 (penetrations and gaps).
- (PR 9582065) In SOL402 shell contact, when considering shell thickness automatically (BCTPAR2 SHLTHK=0 or blank), the size of an internal array was incorrect, leading to a fatal error. This happens more often with parabolic shells but not exclusively. There is no workaround.
- (PR 8428237) With SOL402, the total and incremental sliding results are incorrect if the model contains shells or offsets. Those results are computed as if contact happened on the meshed surface.

Simcenter Nastran – Rotor Dynamics – Solution 414

- The user can define a PreLoad subcase before a rotor dynamics subcase in a Frequency response analysis. If the Preload contains a combination of forces (using the LOAD card), or if different pressure loads PLOAD1, PLOAD2, or PLOAD4 are applied on the same elements with the same SID, the different loads or pressure are not taken into account properly.

Chapter 3: Simcenter Nastran 2020.1 Problem Report (PR) fixes

The following list summarizes the problems that are fixed in Simcenter Nastran 2020.1.

PR#	Short Description
9615753	Problem about orthotropic plane strain element.
9618630	TSVSC parameter in NLCNTL2 card should be TSCVSC.
8432777	Missing small circle on Ur for Yaw rate.
9610937	Performance issue with RDMODES.
8431875	Error when the SID of load in the preload is higher than the number of frequencies.
8431698	Nodal preload not taken into account.
9606424	SOL 402 valcr fatal and significant result difference.
9606084	RIGID = NONLIN produces a crash in GTYMRGD module.
9605051	SOL 402 FPP only checks BCTSET target group and not source group.
9603970	Rigid=lagran causes fatal in SOL 106 with an eigenvalue solution.
9603967	Fail to retrieve contact element data when both 2D and 3D contact in same model.
9602859	VKI solver output is lacking and confusing.
9599188	Crash when calculating ERP.
9600254	Singularity warning message should be output when model contains choking, etc.
9599587	Singular model causes GINO error.
9597871	SOL402 hangs at "PREPARATION TO COMPUTATION".
8430859	Error processing output of SOL402.
9597532	SOL 601 axisymmetric reactions seems to be off by a factor of $2 * \text{Pi}$.
9598603	SOL 402 Fails when mpi402=2 is utilized.
9597382	SOL 402 ignores contact definitions with 7-Digit BSURFS IDs.
9597243	Check1_new fatal.
9595131	Pressure results are different between models with and without GRDCON output.
9595049	SOL 402: contact with sliding velocity, bad translation to Samcef of TOL param.
8430191	SYSTEM FATAL MESSAGE 4276 (UNPACK) // ERROR CODE 31 PID= 0
9594300	Wrong results of SOL 109 rotor case.
9594245	Bolt force + displacement in same preload=FATAL 4690, 23258 but nastran runs.
9593581	SC1899.143.F1.28.PTHRESH not supported by solver.
9593250	RMS results not output for a superelement.
9592995	Wrong answers with RDMODES and frequency response.
9589803	MPI402=n PARALLEL=x ends with "User credentials needed to launch processes".
9591637	Nastran MP timing regression.
9591021	Same analysis works fine in SC2019.2 but fails to start in SC2020.1.

9590612	SOL 402 does not run. Claims LGDISP parameter must be set to 0 with damping.
9589377	Loose load connectivity at glue surface in SOL 200 Topology Optimization.
9589366	Test case has NaN in the f06 files.
9589354	SOL 601 testcases hang.
8429062	The fluid penetration pressure with surface to surface contact leads to a crash in SOL 402.
9587367	Fluid penetration pressure is not correct in f06/OP2 for composite solid model.
9586987	PLOADFP pressure on certain BEDGE regions is applied incorrectly.
8428843	Two PJOINT cannot have the same PID.
8428842	Two CJOINT cannot have the same EID.
9585859	Wrong GPForce output in SMP mode.
9585278	Contact parameter INIPENE enhanced with new values, SOL402.
8428345	SOL112 same displacement result with relative and absolute option.
8428381	KTT matrix and T-set SOL 103.
9581627	EM forces from .sc_h5 file are getting consolidated.
9580453	The way time is reported has changed in nastran on Linux.
9580073	Centrifugal matrix always equal to zero.
9579766	In-Core RDMODES slow performance with NREC>1.
9579456	Visualization issue with initial static computation.
9579006	NXN1899.83: PLOAD4 in two subcase with different CIDs cannot be solved in SOL402.
9578726	Large axisymmetric model fail to compute Fourier modal results in SOL401.
8427182	MBDEXPORT SIMPACK - fbi file produces wrong mode animation in SIMPACK.
9578241	Symmetry filters inaccurate for element with null indices.
9577954	Format issue of bolt results in SOL 402.
9577893	FEMAO log file is too detailed for nxcr.
9577855	Large generalized plane strain model crashed for SOL401.
9577651	NXN1899.82: Access violation error when solving SOL401 restart case.
9575108	Unclear behavior (results) in a SOL 401 preload sequence.
8427682	Documentation update request.
9575546	SC1899.127: Invalid restart points are populated in the subcase name list in Res.
8427508	FPP SOL401: PLOADFP CPCRIT with 2D element never finishes.
9574455	SLED_SC1899.126, SOL 401 cannot solve the model successfully.
9573789	SLED: Geometry optimization result difference in comparison with previous release.
9573516	Solver crash with FREQ=0.
9573112	No Punch files for random analysis.
9573102	No results if incorrect random ID is entered in the case control.
9573096	No random results for some of the random subcases.
9572976	PBEAR and PBEAR2 couldn't have the same PID.
9572958	Two PBEAR2 couldn't have the same PID.
9572942	CBEAR and CBEAR2 couldn't have the same EID.
9572926	Two CBEAR2 couldn't have the same EID.
9572372	SC1899.126: Subcase Labels are missing in Restart Data generated in SOL402.

9572278	PBEAR2 issue running SOL 414.
8427119	SOL 145 - Not able to see aero panel for real mode.
9555277	NX1880.2002 mistakenly acquires 65 more tokens for SOL108 with DMP up to 4.
9557242	Bolt fatal message, SOL 401.
9570095	Positioning error of a super-element, unknown node.
9570046	Bacon crash when a super element is used.
8426790	New maximum size inaccurate results with shell thickness <> 1.0.
9569486	Aero op2 output incorrect for complex modes.
9568320	FMETHD PKNL in SOL 145 does not loop properly.
8426627	SELOC issue if nodes are not defined as BDNDFREE/FIX, and not present in usage.
8426616	Unable to apply rayleigh damping on SE.
9566200	No stress output for FEMAP post processor.
8426493	SOL402 FTCHGM2 fatal if model contains only superelement but no regular element.
9566255	RSTART of rotorod in SOL 414.
9565064	When first subcase doesn't refer to PLOADFP, model fatals in FPPSETUP module.
9565008	Incorrect/inconsistent results with OPPHIA output.
8426098	SOL402 wrong temperature units in Simcenter Postprocessing.
9563455	SOL 111 crashed when frequency dependent fluid and method(fluid) is specified.
8426062	Nastran crash when using a MODCON output with more than 4286 nodes.
8426061	Nastran crash when using PARFAC.
9561827	Fatal FPP error.
9562820	Problem if BSURFS ids are greater than 9999.
9560177	SimCenter Nastran 2019.2 - No Result with DMP.
9559204	NX Nastran Rotor Dynamics, in op2 displacement results in Eigenmodes missing.
9560877	Not running testcase.
9558586	SOL 401 - Error when using user creep and CONM2.
8563290	Von-Mises Stress.
8425786	Unable to combine Rayleigh damping to structural damping in direct approach.
9555320	"Access violation" (C0000005) error during solution.
9558414	USER FATAL MESSAGE 9457 (SOLSAM).
9557395	e402cont202 fails in windows with fatal error.
9555465	With Multiple RPMs, Frequency interpolation causes memory failure.
8425262	SOL 414,101 should raise a fatal error if trying to run a maneuvers in rotating.
9553877	TABS does not work for MATCRP TYPE 1 and 2 in SOL 402.
8424827	The fluid penetration cannot be stopped by contact pressure in CQUAD8 model.
9550965	SOL402 dynam analysis: initial speed works only one component.
9550836	"out" keyword command does not change unv file name.
9550647	Transient results of SOL 414(speed-up, speed-down).
9549763	SDR2 performance degradation on modal analysis of shells in SOL 103.
9549122	FEMAO dmp gives wrong microphone pressure (different than smp results).

8424598	Error with MBAL in SOL 414,129
8424533	ASSIGN SC_H5 path limitation in Simcenter Nastran.
9548277	Fatal due to CONM2.
9547676	Creep strain is not correct for MATCRP Type=1 and 2 in SOL 402.
9547519	The coordinates of grids are not correct after translation from SOL 402 to Samcef.
9547481	In SOL401, error ELEMENT x GEOMETRY YIELDS UNREASONABLE MATRYX.
9546504	Effective plastic strain is not correct for SOL 402 model with plasticity and creep.
8424270	SOL 402 produces the error %%%E01-OP2BCTPAR2: Parameters compatibility.
8424263	Solver raise fatal error with Hessenberg Method during processing,
9545619	SOL414,101 : load case name should be the subcase labels.
9545606	SOL414 output files must be generated independently of NXNS_FILEKEEP.
8424256	SOL 414 crashed when processing material.
8424222	Missing stress result in the intermediate freq results in 414,111.
8424211	Solver crashed if BDNDFREE is used in the super element.
9545106	Doing solid element bolt preload but preload only working on some bolts.
9545092	Fatal error for SOL 108 Mumps.
8424199	SELOAD not taken into account as pressed in SOLs 414,110 and 414,111.
8424197	Cannot use superelement in SOL 414, 101.
9542102	Mode acceleration data recovery incorrect with internal loads.
9523066	Error in applied load when using sequential dependent subcases.
9540811	CBUSH does not work with SOL 414.
9540428	SOL 402 is not applying a fluid pressure defined on the surface of a CPYRAM element.
9538185	BOLT load changes if rotation.
9538139	LMS0938: Exception in solve while solving the attached SOL200 Sensitivity case.
9537386	Restarts fail with temperature.
9536660	LMS0938: Pressure results are not output for vibro-acoustic sensitivity case.
8423174	Error when applying RFORCE preload in rotating frame.
8423155	Multi Harmonic computed when using multiple UNBA on different rotors.
9531518	Documentation for the KSTAB param on the BCTPARAM card is missing in QRG.
8422498	Wrong case control command for flutter card.
9529240	SOL103 performance regression.
8561965	FEMAO Vibro-Acoustics is too slow compared to standard FEM.
9528781	SOL 401 - "Access Violation" Exception in 1872.
9528814	Description of the Edit Modes Dialog box is incorrect in the documentation.
9528638	NXAC coupling crashed.
9525526	SOL101 end with VKI ITERATIVE SOLVER FAILED TO CONVERGE.
9527846	Fatal Error with Sys693=100 (Pardiso Out of Core).
9526961	Pressure results of ATV model.
9526021	Performance regression of modal analysis of shell elements.
8421796	Error conversion unit SOL 402 restart.

9523544	Lose of Thermal dependency for Young and Poisson ratio.
9522191	Message with time reference instead of load factor.
9521014	k402rerun3d1neg fails.
9518420	Slower Performance of Manufacturing Constraints.
9518132	Convergence problems with the testcase k401czshapet60 on windows.
9517629	Mode set binary export unable to solve the SOL 111 modal mfrequency response.
9516003	Multi-RPM vibro-acoustic response with FEMA0.
9499966	NX Nastran steady state thermal radiation issue.
9513687	Fatal case of SOL 111 with *atv.op2.
9511003	The TOTALS of GPFORCE output is not near zero for composite solid with CHEXA.
9507903	*** SYSTEM WARNING MESSAGE 6299 (PARCPU) NO PARALLEL PROCESS CREATED.
9506935	Incorrect equation on RADBC entry in QRG.
9506927	INSUFFICIENT CORE AVAILABLE FOR SUBROUTINE FRRD1A_NEW.
9506328	Many messages in SOL402 DMP: %%%A01-TEMTV2, NODE xx TEMPERATURE NOT DEFINED.
9505471	VATV response analysis cases with external loads or external PSD crashed.
9505361	Mixing 3D and Axisym elements in the same model.
9498200	About "Curve-fitting of MATSR".
9504164	SOL 401 model gets wrong results with DMP.
9499927	Performing unnecessary AUTOSPRT for SOL 108.
9498303	SOL601-106 DMIG issue.
9420636	Using "auto" CSYS for bolt type 3 results in wrong axial vector.
8418069	Problem of performance with Mooney - Gluing - bulk 22 (new development).
8417583	Problem of post processing of the VonMises Stress[Cauchy] in SOL402.
9452944	USER FATAL MESSAGE 6134 (DFMN).
9480296	Elastic strain is not correct when both SML creep and plasticity are used in 401.
8417153	When only MODAL subcase, no TEMP(INIT) -> TEMP is assigned.
9479719	The unit of temperature is not converted correctly when TABS=459.69.
9475942	Hyperelastic Ogden law, SAMCEF and SOL601 have same result, SOL402 wrong result.
9455516	Unexpected results in a rotordynamic analysis.
9473563	Translation error of PLOAD card in SOL402.
9472895	Dmp testcase s401brkt1p seg failures on linux in 1899.
9472848	SOL 401 Total Force Singular Matrix with Intel 2019 update 3 compiler.
9469534	SOL 401 - Model solves without restraint.
9464340	Without the license rotor dynamics analysis solves with different result.
8415484	Strange nodal penetration untreatable by INIPENE under high loads.
9461627	PLOAD direction.
9461039	Wrong results with both load and dload in the same subcase.
9457614	PARDISO support for Matrix factorization crashes in SOL 108.
9455727	DMP + PARDISO results in silent crash.
9451103	Subcase2 should be skipped with exefrom=3,rstfrom=1.

9429843	About the calculation of Element Iterative Solver.
9388959	DMP doesn't work once Nastran executable is located in a path with spaces.
9361350	RVEL on non-existing elements is ignored.
9346396	Fan noise source modeling provides wrong results with refined FEMAO meshes.
9296546	SOL 108 and SOL 111 results differ when CTYPE=STRONG, comparing hFEM and FEMAO Results.
8995839	Computed beam section properties incorrect.

Chapter 4: Simcenter Nastran 2020.1 operating system requirements

The following tables list the supported 64-bit operating system requirements to run Simcenter Nastran 2020.1. The product was tested using these operating system levels.

INTEL Windows (64-bit)

- Win Server 2012 R2 Standard
Win Server 2016 Standard
Win Server 2019 Standard
- Windows 10 Enterprise

Linux (64-bit)

- SUSE SLES 12
SUSE SLES 12 SP4
SUSE SLES 15 SP1
- Red Hat ES 7.0
Red Hat ES 7.7
- Centos 7.0
Centos 7.6
Centos 7.7

Siemens Industry Software

Headquarters

Granite Park One
5800 Granite Parkway
Suite 600
Plano, TX 75024
USA
+1 972 987 3000

Americas

Granite Park One
5800 Granite Parkway
Suite 600
Plano, TX 75024
USA
+1 314 264 8499

Europe

Stephenson House
Sir William Siemens Square
Frimley, Camberley
Surrey, GU16 8QD
+44 (0) 1276 413200

Asia-Pacific

Suites 4301-4302, 43/F
AIA Kowloon Tower, Landmark East
100 How Ming Street
Kwun Tong, Kowloon
Hong Kong
+852 2230 3308

About Siemens Digital Industries Software

Siemens Digital Industries Software is driving transformation to enable a digital enterprise where engineering, manufacturing, and electronics design meet tomorrow. Our solutions help companies of all sizes create and leverage digital twins that provide organizations with new insights, opportunities, and levels of automation to drive innovation. For more information on Siemens Digital Industries Software products and services, visit [siemens.com/software](https://www.siemens.com/software) or follow us on [LinkedIn](#), [Twitter](#), [Facebook](#), and [Instagram](#).

*Siemens Digital Industries Software —
Where today meets tomorrow.*

© 2019 Siemens. A list of relevant trademarks can be found [here](#). All other trademarks belong to their respective owners.