

SALOME version 8.2.0

Release Notes

February 2017

Table of Contents

◆ GENERAL INFORMATION	3
◆ PREREQUISITES	4
<i>License restrictions</i>	6
◆ CHANGE LOG	7
KERNEL MODULE.....	7
GUI MODULE.....	7
GEOMETRY MODULE	7
MESH MODULE	8
MED MODULE	11
PARAVIS MODULE	12
YACS MODULE	12
MG-CADSURF PLUGIN MODULE	12
MG-TETRA PLUGIN MODULE	13
MG-TETRA PARALLEL PLUGIN MODULE	14
MEDCOUPLING MODULE	14
OTHER ISSUES	14
◆ SUPPORTED DISTRIBUTIONS AND PRE-REQUISITES	15
◆ SYSTEM REQUIREMENTS	19
◆ HOW TO GET THE VERSION AND PRE-REQUISITES	20
◆ LICENSE	21
◆ KNOWN PROBLEMS AND LIMITATIONS	22

❖ GENERAL INFORMATION

CEA/DEN, EDF R&D and OPEN CASCADE are pleased to announce [SALOME](#) version [8.2.0](#). It is a public release that contains the results of planned major and minor improvements and bug fixes against SALOME version 7.8.0 released in July 2016.

❖ PREREQUISITES

The table below lists pre-requisite products used with SALOME 8.2.0. The differences of 3rd-party product versions used for SALOME 7.8.0 and 8.2.0 are highlighted in bold.

Product	SALOME 7.8.0	SALOME 8.2.0
Babel	2.0	2.0
Boost	1.52.0	1.52.0
Cgns	3.1.3-4	3.1.3-4
Cmake	3.0.2	3.3.0
Cppunit	1.12.1	1.12.1
Cython	0.23.2	0.23.2
Distene MeshGems suite ¹	2.1-11	2.3-8
Distribute	0.7.3	0.7.3
Docutils	0.12	0.12
Doxygen	1.8.3.1	1.8.3.1
Freeimage	3.16.0	3.16.0
Freetype	2.4.11	2.4.11
Gl2ps	1.3.8	1.3.9²
Graphviz	2.38.0	2.38.0
Hdf5	1.8.14	1.8.14
H5py	2.5.0	2.5.0
Homard	11.7	11.7
Intel® Threading Building Blocks	4.2.4	4.2.4
Jinja2	2.7.3	2.7.3
Lapack	3.5.0	3.5.0
Libbatch ³	2.3.0	2.3.0
Libxml2	2.9.0	2.9.0
Markupsafe	0.23	0.23
Matplotlib	1.4.3	1.4.3
Med	3.2.0	3.2.1
MedCoupling ⁴	7.8.0	8.2.0
METIS	5.1.0	5.1.0
Mpi4py	1.3.1	1.3.1
Netgen	4.9.13	5.3.1

¹ Commercial product; requires license.

² Development version, downloaded from Subversion repository on June 20, 2016.

³ LibBatch is a former part of SALOME KERNEL module which has been extracted to a separate package.

⁴ MedCoupling is a former part of SALOME MED module which has been extracted to a separate package.

Product	SALOME 7.8.0	SALOME 8.2.0
Nose	1.3.7	1.3.7
Numpy	1.9.2	1.9.2
Omniorb	4.1.6	4.1.6
Omniorbpy	3.6	3.6
Open CASCADE Technology	6.9.1	7.0.0
Opencv	2.4.6.1	2.4.6.1
Openmpi	1.8.5	1.8.5
Paco++	0.5.5	0.5.5
Paraview	5.0.1	5.1.2⁵
Pkgconfig	1.1.0	1.1.0
Pygments	2.0.2	2.0.2
Pyparsing	2.0.3	2.0.3
Pyqt	4.9.6	5.6.0
Python	2.7.10	2.7.10
Python-dateutil	2.4.2	2.4.2
Pytz	2015.4	2015.4
Qt	4.8.4	5.6.1
Qwt	6.1.0	6.1.2
Scipy	0.15.1	0.15.1
Scotch	5.1.11	5.1.11
Setuptools	0.6c11	0.6c11
Sip	4.14.2	4.18
Six	1.9.0	1.9.0
Sphinx	1.2.3	1.2.3
Swig	2.0.8	2.0.8
Tcl	8.6.0	8.6.0
Tk	8.6.0	8.6.0
Tclx	8.4.1	8.4.1
Vtk ⁶	7.1.0	7.1.0

Note: the table above lists only most important pre-requisite products; some optional products are not shown. For additional information about pre-requisite products and SALOME modules dependencies refer to the paragraph “[Supported distributions and pre-requisites](#)” below.

⁵ SALOME uses patched version of ParaView.

⁶ Version included in ParaView distribution.

License restrictions

Hereby we explicitly declare that PyQt (by Riverbank Computing Ltd) used by SALOME is distributed under the terms of GNU GPL license; for more details please refer to the PyQt site:

<http://www.riverbankcomputing.com/software/pyqt/license>

If you plan using SALOME for commercial purposes please consider obtaining a commercial license for PyQt from Riverbank Computing Ltd.

❖ CHANGE LOG

This chapter does not provide the complete list of changes included into this version of SALOME; only the most important changes are listed.

KERNEL MODULE

23289	<i>Summary:</i> [CEA 1872] Problem in the CMakeLists.txt of the template profile The problem with CMakeLists.txt in the template profile has been fixed.
23310	<i>Summary:</i> [CEA 1905] SALOME master - logs kernel debug mode The problem with logs in SALOME KERNEL module in debug mode has been fixed.

GUI MODULE

23345	<i>Summary:</i> [CEA 1930] Wrong display of the unit in degrees A problem with displaying degrees symbol "°" has been fixed.
23354	<i>Summary:</i> EDF 13548 EFICAS: Salome crash The issue with the handling Python fatal exceptions in PyQt has been fixed.
23360	<i>Summary:</i> [CEA 1963] Use <code>salome.sg.updateObjBrowser(True)</code> instead of <code>salome.sg.updateObjBrowser(1)</code> . The call <pre>salome.sg.updateObjBrowser(1)</pre> has been replaced by <pre>salome.sg.updateObjBrowser(True)</pre> in the Python dump and in all Python scripts in the main SALOME modules, to avoid problem of SWIG 3 usage.
23375	<i>Summary:</i> [CEA] Add command line option to force application language. New command line option <code>-a</code> forces application's language. For example: <pre>salome start -a fr</pre>

GEOMETRY MODULE

23124	<i>Summary:</i> EDF 11219 GEOM: Ray tracing in the OCC viewer Improved visualization capabilities on high-performance graphical cards by means of Ray Tracing algorithms are now available in OCC 3D viewer.
23162	<i>Summary:</i> EDF 11487 - additional elements after partition. Partition algorithm has been improved to remove all unnecessary additional elements from the result shape.

23251	<p><i>Summary:</i> [CEA 1775] Freeze when making extrusion</p> <p>An application hangs up during making extrusion has been fixed.</p>
23253	<p><i>Summary:</i> [CEA 1783] The length given by basic properties on a partition of faces is not correct</p> <p>The length, surface and volume of shared edges, faces and volumes are taken into account only once when calculating basic properties of geometrical objects.</p>
23272	<p><i>Summary:</i> [CEA] Add a tolerance for basic properties computation.</p> <p>Additional parameter <code>theTolerance</code> has been introduced for computation of basic properties of a geometrical object.</p>
23284	<p><i>Summary:</i> EDF 13077 GEOM: Build GEOM without GUI and without VTK</p> <p>A possibility to build Geometry module without linkage to VTK (in case if GUI is not built) has been introduced.</p>
23309	<p><i>Summary:</i> [EDF 12969] Clarify sorting algorithm of <code>SubShapeAllSortedCentres</code> function</p> <p>Documentation of <code>SubShapeAllSortedCentres</code> family of function has been extended by description of the used algorithm's implementation details.</p>
23326	<p><i>Summary:</i> [CEA 1934] Error when extracting a shape</p> <p>A bug was fixed in the extract shape operation.</p>
23329	<p><i>Summary:</i> <code>MakeThickSolid</code> : Offset driver failed</p> <p>A bug was fixed in the offset algorithm.</p>
23351	<p><i>Summary:</i> [CEA 1955] Crash if filling has only one edge</p> <p>A small workaround has been implemented in filling algorithm.</p>
23357	<p><i>Summary:</i> EDF 13600 - Problem of partition</p> <p>The problem with partition operation if the tool object is a non-planar face has been fixed.</p>
23366	<p><i>Summary:</i> [CEA 1972] Porting Salome to GCC 6</p> <p>Some changes have been integrated in order to build Geometry module with GCC 6 and SWIG 3.</p>

MESH MODULE

23166	<p><i>Summary:</i> EDF 11517 SMESH: Dump view into PostScript fails</p> <p>The user now is able to manage quality of the PostScript image via the dedicated dialog box.</p>
23201	<p><i>Summary:</i> EDF 11624 [SMESH]: Harmonisation of "0D Element" and "0D Elements on Element Nodes"</p>

	"Add 0D Element" and "Add 0D Elements on Element Nodes" operations have been unified. Now creation of several 0D elements on a node is possible in the both operations and is controlled by the user.
23254	<i>Summary:</i> EDF12515 - Zooming / Rotating / Panning with many groups Solved with migration on Qt 5.6.
23272	<i>Summary:</i> EDF SMESH: Pre-study for Netgen 5x. An additional patch for NETGEN 5.3.1 has been produced to migrate it to OCCT-7.0.0 and to fix regressions caused by the switch from NETGEN 4.9.13 to 5.3.1.
23281	<i>Summary:</i> [CEA 1859] SALOME master: compilation SMESH - error StdMeshers_ViscousLayers2D A compilation problem has been fixed.
23282	<i>Summary:</i> EDF 13035 - Problem with sub-meshes priority A bug that changing priority of sub-meshes has no effect in the case of sub-meshes on groups has been fixed.
23288	<i>Summary:</i> [CEA 1626] MeshGems v2.3 SALOME meshing plugins have been migrated to DISTENE MeshGems 2.3.
23291	<i>Summary:</i> [CEA 1881] - Test regression imp_1347_viscous_layers.py Viscous Layer algorithm has been improved.
23295	<i>Summary:</i> [CEA 1870] Impossible to mesh the inside of the 2D skin of an object meshed with quadrangles A bug that NETGEN 3D constructs pyramids in a cylindrical hole meshed with quadrangles, has been fixed.
23298	<i>Summary:</i> EDF 13271 SMESH: ExportMED fails A wrong auto-detection of space dimension at MED export of a mesh based on a shape with incorrectly huge tolerance, causing MED export failure, has been fixed.
23300	<i>Summary:</i> [EDF 12865] Independent calculation of sub-meshes Now a sub-mesh can be computed individually.
23302	<i>Summary:</i> [EDF 12800] Ergonomics of mesh group export operation Ergonomics of mesh group export operation has been improved.
23303	<i>Summary:</i> [EDF 12024] Filter for nodes connectivity A new numeric functor "Node connectivity number" (FT_NodeConnectivityNumber) returning number of elements of highest dimension connected to a node has been introduced. It is available in the Filter dialog.

23304	<p><i>Summary:</i> [EDF 10304] Radial Quadrangle on ellipse</p> <p>Radial Quadrangle algorithm has been enhanced to mesh elliptical disks with composite sides.</p>
23305	<p><i>Summary:</i> [EDF 10301] Extrusion with scaling</p> <p>Extrusion Along a Line has been improved to allow scaling along with extrusion.</p>
23306	<p><i>Summary:</i> [EDF 8444] Mesh controls behaviour</p> <p>The caption along with a number of mesh entities satisfying a control criterion has been added to the following controls:</p> <ul style="list-style-type: none"> - Free nodes - Double nodes - Free borders - Double edges - Free edges - Free faces - Faces with bare borders - Over-constrained faces - Double faces - Volume with bare borders - Over-constrained volumes - Double volumes
23307	<p><i>Summary:</i> [EDF 7315] Improvement of DISTENE meshing plugins</p> <p>Management of advanced options in hypotheses of MeshGems meshers has been unified.</p>
23308	<p><i>Summary:</i> [EDF] Re-implement DISTENE meshing plugins to use libraries instead of executables</p> <p>MeshGems plug-ins have been re-implemented to use MeshGems meshers as libraries and not as executables. The old usage mode (as executables) can be activated at plug-in compilation.</p>
23315	<p><i>Summary:</i> [CEA 1929] Too much memory used to display a mesh in shading and wireframe</p> <p>The memory usage for mesh visualization has been decreased.</p>
23323	<p><i>Summary:</i> REGRESSION: SMESH: Mesh on a box partitioned with a plane Netgen 1D2D + MG tetra</p> <p>Regression of MG-Tetra plugin has been fixed.</p>
23324	<p><i>Summary:</i> REGRESSION: SMESH: Failure to mesh geometry with MG-Tetra algorithm</p> <p>Regression of MG-Tetra plug-in that it incorrectly assigns tetra to solids has been fixed.</p>
23332	<p><i>Summary:</i> EDF 13475 - Wrong quadratic mesh</p>

	Invalid conversion to quadratic has been fixed.
23334	<i>Summary:</i> EDF - Problem with viscous layer Regression of viscous layers construction algorithm has been fixed.
23337	<i>Summary:</i> [CEA 1942] When we modify a mesh hypothesis, the display in the 3D view is not deleted immediately A problem with updating mesh in the 3D viewer after modifying a mesh hypothesis has been fixed.
23344	<i>Summary:</i> [CEA 1950] Hybrid doesn't work on Windows Incorrect launching of mesh-hybrid on Windows has been solved.
23346	<i>Summary:</i> EDF - Non regression test fails The bug that PreCAD is activated while no PreCAD option is set while running MG-CADsurf has been fixed.
23352	<i>Summary:</i> [CEA] Order and naming of meshing algorithms The algorithms and hypotheses in the Create mesh dialog are now grouped by type and sorted by usage frequency.
23365	<i>Summary:</i> [CEA 1938] Export med from a XAO file fails Crash at export of a GEOM field into a MED file has been fixed.
23378	<i>Summary:</i> [EDF] The conversion of Mesh to quadratic is not done Exception in the convert mesh to quadratic functionality has been suppressed.
23382	<i>Summary:</i> [CEA 1981] Wrong mesh SMESH test Regression in conversion to quadratic automatically performed after computing a quadratic mesh has been fixed.
23386	<i>Summary:</i> EDF 13811 - Crash SALOME during compute Crash connected to "Fixed Points" hypotheses with zero number of segments has been fixed.
23388	<i>Summary:</i> EDF 13823 SMESH: Size of MED_BALL in SMESH The problem with visualization of mesh balls elements has been corrected.
23394	<i>Summary:</i> EDF - non regression test fails - problem of projection of a quadrangle face on a cylinder Regression of mesh update upon hypothesis modification has been fixed.

MED MODULE

23223	<i>Summary:</i> [CEA 1710] regression - bug CEA 983 - case2med
-------	--

	CaseReader . py has been fixed not to crash at empty lines at the file end.
23285	<i>Summary:</i> [CEA 1778] SauvReader: only keep the meshes named in the table MED_MAIL. Sauv2Med convertor has been modified so that now only cells belonging to named groups are created.
23293	<i>Summary:</i> [CEA 1891] SALOME master - MEDCOUPLING - failure of unit test "TestINTERP KERNEL" - Ubuntu 16.04 Correct test's behaviour has been restored.
23311	<i>Summary:</i> [CEA 1922] SALOME master - m4 macro CHECK_MED is invalid The m4 macros have been upgraded to work with SALOME 8.
23400	<i>Summary:</i> EDF 13890 MEDCalc: SIGSEGV when Salome closing. SIGSEGV during closing SALOME application after activation MED module has been fixed.

PARAVIS MODULE

23270	<i>Summary:</i> [CEA 1822] PARAVIS GUI widgets should be instantiated only when needed Fixed problem with incorrect initialization order of ParaView controls in SALOME ParaVis module.
23377	<i>Summary:</i> PARAVIS: SIGSEGV exiting SALOME/PARAVIS SIGSEGV during SALOME application closing after ParaVis module activation has been fixed.

YACS MODULE

23359	<i>Summary:</i> [CEA 1965] Problem with the method isAlreadyLinkedWith in YACS The problem with the method isAlreadyLinkedWith in YACS has been corrected.
-------	---

MG-CADSURF PLUGIN MODULE

23338	<i>Summary:</i> [CEA 1943] Regression on the quality of the meshes obtained by CADSurf Gradation parameter has been re-activated by default.
23340	<i>Summary:</i> [CEA 1945] The option Process 3D topology is missing in the dialog box Process 3D topology option has been added to the advanced options.
23347	<i>Summary:</i> [CEA 1951] Optimize tiny edges vs Remove tiny edges Improve documentation of "Optimize tiny edges" and "Remove tiny edges" options.
23350	<i>Summary:</i> [CEA 1941] Volume gradation option doesn't work

	Problem with gradation option has been fixed.
23363	<i>Summary:</i> [CEA 1967] BLSURFPLUGIN porting patch for g++ 6 Compilation MG-CADSURF plugin module with GCC version 6 has been corrected.
23368	<i>Summary:</i> [CEA 1865] Possibility to define faces to mesh as a single one: trans patch mesh The possibility to define hyper-patches composed of faces meshed together as a whole has been introduced in the user interface of MG-CADSURF plugin. In TUI, the definition of hyper-patches can look as follows: <code>cadsurf.SetHyperPatches([[Face_1, Group_2], [13, 23]])</code>
23370	<i>Summary:</i> [CEA 632] Impose enforced vertices without indicate the face on which the node is Interface of MG-CADSurf plugin has been simplified by suppressing the need to specify a face while defining enforced vertices.

MG-TETRA PLUGIN MODULE

23321	<i>Summary:</i> EDF 12916 - Meshing problem Exception in MG_Tetra in the case of a quadrangle non-conformal mesh not based on geometry has been fixed
23335	<i>Summary:</i> [CEA 1939] MG-Tetra does not mesh the inside of a skin mesh A regression that mg-tetra.exe is not launched in "executable" mode has been fixed.
23336	<i>Summary:</i> [CEA 1940] Crash when editing a skin mesh generated by MG-Cleaner Application crash at editing a mesh created by MG-Cleaner has been fixed.
23341	<i>Summary:</i> [CEA 1946] Error when meshing with MG-Tetra without hypothesis Duplication of issue 23335.
23343	<i>Summary:</i> [CEA 1949] On windows, max_memory too big compared to the memory of the computer A problem with incorrect computation of free memory on Windows has been fixed.
23348	<i>Summary:</i> EDF 12916 - SALOME crashes when generating the pyramids A SIGSEGV during creation of pyramids has been fixed.
23373	<i>Summary:</i> [CEA 1170] Optimization of a 3D mesh using MG-Tetra An ability of MG-Tetra to optimize existing tetrahedral meshes has been introduced in SALOME interface in the form of "MG-Tetra Optimization" algorithm. This algorithm can be assigned only to a mesh not based on geometry.

MG-TETRA PARALLEL PLUGIN MODULE

23372	<p><i>Summary:</i> [CEA 1524] Impossible to use MG-Tetra Parallel to mesh the inside of a skin mesh</p> <p>The possibility to use MG-Tetra_HPC algorithm on a shell mesh not based on geometry has been implemented</p>
-------	---

MEDCOUPLING MODULE

In the versions 8-x of SALOME some significant API renaming has been performed in the MEDCoupling public API.

A full dedicated documentation page is available in the official MEDCoupling documentation, under "Appendix" → "Porting code/scripts from version 7 to 8".

The rationale of the change was to make some functions' names more explicit, more harmonious with other existing items, and to avoid having too many patterns like "func", "func2" and "func3".

The page indicated above list the full list of changes and also guides you into the migration process, pointing notably towards an automatic conversion script which was used to port the MEDCoupling library itself.

OTHER ISSUES

23290	<p><i>Summary:</i> [CEA 1873] GMSHPLUGIN doesn't compile in SALOME master</p> <p>Qt check procedure for autoconf has been updated for Qt 5.</p>
23296	<p><i>Summary:</i> [CEA 1896] The occ view is too slow using Qt5</p> <p>Solved with migration on Qt 5.6.</p>
23313	<p><i>Summary:</i> [CEA 1917] bug_1194_start_log regression</p> <p>Fixed regression in log management of GUI embedded Python console.</p>
23364	<p><i>Summary:</i> [CEA 1966] Problem with FindCplusplus.cmake</p> <p>The way to find cplusplus third-party product has been slightly changed in order to use the latest native versions of this product on Linux.</p>

❖ SUPPORTED DISTRIBUTIONS AND PRE-REQUISITES

SALOME is a cross-platform solution that supports Linux and Windows.

SALOME 8.2.0 comes with the same versions of pre-requisites on all supported platforms (with some minor exceptions). The table below lists the versions of the pre-requisite products used by SALOME platform. Other versions of the products can also work but it is not guaranteed.

Product	Version	GUI (APP)	KERNEL	GEOM	SMESH	MED	YACS	PARAVIS	HOMARD	HEXABLOCK	NETGENPLUGIN	GHS3DPLUGIN	GHS3DPRPLPLUGIN	BLSURFPLUGIN	HexoticPLUGIN	HEXABLOCKPLUGIN	HYBRIDPLUGIN
gcc*	4.4***	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
GNU make*	3.81***	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Microsoft Visual C++**	2010	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
cmake	3.3.0	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Python	2.7.10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Qt	5.6.1	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sip	4.18	X			X												
PyQt	5.6.0	X			X												
Boost	1.52.0	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Swig	2.0.8	X	X	X	X	X	X		X		X	X	X	X	X	X	X
OCCT	7.0.0	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X
Qwt	6.1.2	X			X												
OmniORB	4.1.6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
OmniORBpy	3.6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Hdf5	1.8.14	X	X	X	X	X		X	X		X	X	X	X	X	X	X
Med	3.2.1				X	X		X	X		X		X				
MedCoupling	8.2.0					X		X									
Vtk	7.1.0	X		X	X	X		X		X	X	X	X	X	X	X	X
numpy	1.9.2		X														
lapack	3.5.0		X														
graphviz	2.38.0	X	X	X	X	X	X				X	X	X	X	X		X
Doxygen	1.8.3.1	X	X	X	X	X	X				X	X	X	X	X	X	X
NETGEN	5.3.1										X						
Metis	5.1.0					X											
Scotch	5.1.11					X											
libxml2	2.9.0	X	X			X	X										
Distene MeshGems	2.3-8											X	X	X	X		X
Sphinx	1.2.3		X	X	X		X		X	X							
libBatch	2.3.0		X														
Cgns	3.1.3				X												
ParaView	5.1.2	X						X									
Homard	11.7								X								

*) Linux only
 **) Windows only
 ***) Minimal required version

Product	Version	RANDOMIZER	SIERPINSKY	PYCALCULATOR	COMPONENT	CALCULATOR	HELLO	LIGHT	PYLIGHT	ATOMIC	ATOMGEN	ATOMSOLV	HXX2SALOME	YACSGEN	JOBMANAGER
gcc*	4.4**	X	X	X	X	X	X	X	X	X	X	X	X		X
GNU make*	3.81***	X	X	X	X	X	X	X	X	X	X	X	X		X
Microsoft Visual C++**	2010	X	X	X	X	X	X	X	X	X	X	X	X		X
Python	2.7.10	X	X	X	X	X	X	X	X	X	X	X		X	X
Qt	5.6.1		X		X	X	X	X		X	X	X	X		X
Sip	4.18				X						X				
PyQt	5.6.0				X				X		X				
Boost	1.52.0		X			X	X					X			X
Swig	2.0.8		X		X	X									
OCCT	7.0.0		X		X	X	X	X		X		X			
Qwt	6.1.2				X										
OmniORB	4.1.6	X	X	X	X	X	X				X	X			X
OmniORBpy	3.6	X	X	X	X	X	X				X	X			X
Hdf5	1.8.14		X		X	X		X		X					
Med	3.2.1		X	X	X	X									
Vtk	7.1.0		X		X			X	X	X		X			
graphviz	2.38.0	X	X	X	X		X			X					
Doxygen	1.8.3.1	X	X	X	X		X			X					
Sphinx	1.2.3														X

*) Linux only
 **) Windows only
 ***) Minimal required version

The following products are not mandatory for SALOME directly; these products are either optional for SALOME or only required to build other pre-requisite products.

Product	Version	Required by	Comment
Babel	2.0	Sphinx	
Cppunit	1.12.1	KERNEL, MED, GEOM, YACS, HEXABLOCK	Optional
Cython	0.23.2	H5py, Mpi4py, Scipy	Not used directly by SALOME
Distribute	0.7.3	Matplotlib	
Docutils	0.12	Sphinx	
Freeimage	3.16.0	Open CASCADE Technology	Optional
Freetype	2.4.11	Open CASCADE Technology, ParaView	
Gl2ps	1.3.9	Open CASCADE Technology, VTK, ParaView	Optional
H5py	2.5.0		Not used directly by SALOME
Intel TBB	4.2.4	Open CASCADE Technology, SMESH	Optional
Jinja2	2.7.3	Sphinx	
Markupsafe	0.23	Shinx	
Matplotlib	1.4.3	ParaView	Optional
Mpi4py	1.3.1		Not used directly by SALOME
Nose	1.3.7	H5py	
Opencv	2.4.6.1	GEOM	Optional

Openmpi	1.8.5	ParaView, Hdf5, Med, KERNEL, MED	Optional
Paco++	0.5.5	KERNEL	Optional
Pkgconfig	1.1.0	H5py	
Pygments	2.0.2	Sphinx	
Pyparsing	2.0.3	Matplotlib	
Python-dateutil	2.4.2	Matplotlib	
Pytz	2015.4	Matplotlib	
Scipy	0.15.1	Matplotlib	
Setuptools	0.6c11	Sphinx	
Six	1.9.0	Matplotlib	
Tcl	8.6.0	Open CASCADE Technology, Python	Optional
Tk	8.6.0	Open CASCADE Technology, Python	Optional
Tclx	8.4.1	Open CASCADE Technology, Python	Optional

SALOME 8.2.0 depends on a number of products for run time execution, others are necessary only for compilation or generation of development documentation (like doxygen for example). Below there is a list of mandatory and optional products.

Software Requirements

Product	Compilation and Development		Execution		Remarks
	Mandatory	Optional	Mandatory	Optional	
Gcc	X		X		
GNU make	X				
Microsoft Visual C++	X		X		For execution, runtime libraries are only required
Boost	X		X		
Cgns		X		X	For SMESH only Required only if used at compilation step
Cmake	X				
Cppunit		X			Used for unitary testing
Distene MeshGems suite	X	X	X		Compilation: mandatory for BLSURFPLUGIN only, optional for HEXOTICPLUGIN Runtime: mandatory for BLSURFPLUGIN, GHS3DPLUGIN, GHS3DPRLPLUGIN, HexoticPLUGIN, HYBRIDPLUGIN
Doxygen		X			Needed only for documentation generation
Freetype	X		X		
Freeimage		X		X	Required only if used when building OCCT
GI2ps		X		X	Required only if used when building OCCT and/or Paraview
Graphviz	X		X		In run-time required for YACS only
Hdf5	X		X		
Homard			X		For HOMARD module only
Intel TBB		X		X	Required if used when building OCCT and/or if used to build SMESH
Libbatch		X		X	Required only if used at compilation step for KERNEL
Libxml2	X		X		
Matplotib				X	Required only if used when building ParaView
Med	X		X		
Metis		X		X	Required only if used at compilation step for MED
Netgen	X		X		For NETGENPLUGIN only
Numpy (+ Lapack)		X		X	Required by MED
Omniorb	X		X		
Omniorbpy	X				
OCCT	X		X		
Opencv		X		X	Required only if used at compilation step for GEOM
Openmpi		X		X	Required only if used when building SALOME and/or pre-requisites
Paco++		X		X	Required only if used at compilation step for KERNEL
ParaView	X		X		Mandatory for PARAVIS module; optional for GUI module
Pyqt	X		X		
Python	X		X		
Qt	X		X		
Qwt	X		X		
Scotch		X		X	Required only if used at compilation step for MED
Sip	X				
Sphinx		X			Needed only for documentation generation
Swig	X				
Vtk	X		X		

❖ SYSTEM REQUIREMENTS

Minimal Configuration:

- Processor: Pentium IV
- 512 MB RAM
- Hard Drive Space: 3 GB
- Video card 64 MB

Optimal Configuration:

- Processor: Dual Core
- 2 GB RAM + 2 GB Swap
- Hard Drive Space: 5 GB
- Video card 128 MB

❖ HOW TO GET THE VERSION AND PRE-REQUISITES

Sources of SALOME 8.2.0 can be retrieved from the Git repositories using V8_2_0 tag; the complete list of repositories can be found at <https://git.salome-platform.org/gitweb/>.

All pre-requisites can be obtained either from the Linux distribution (please be sure to use a compatible version) in form of native package or from the distributors of these pre-requisites.

Note: SALOME version 8.2.0 uses patches for some third-party pre-requisite products, such as ParaView, Netgen and other. These patches solve different problems detected within SALOME project.

❖ LICENSE

SALOME platform is distributed under terms of the GNU Lesser General Public License (LGPL) license version 2.1. All used pre-requisites use similar or compatible licenses (with minor exceptions). Detail information about licenses used by SALOME and its pre-requisites can be found on the following page: <http://www.salome-platform.org/downloads/license/>.

Please refer to the “License restrictions” paragraph about license restrictions.

❖ KNOWN PROBLEMS AND LIMITATIONS

- The following modules are obsolete and not included into SALOME 8.2.0 release: FILTER, SUPERV, MULTIPR, VISU (Post-Pro). These modules are considered obsolete and not supported anymore.
- Application crash might occur on the data publication in the study if both data server and CPP container are running in the standalone mode.
- On some platforms the default font settings used in SALOME might cause bad application look-n-feel. This problem can be solved by changing the font settings with `qtconfig` utility included into the distribution of Qt.
- The following limitations refer to MG-CADSurf meshing plug-in:
 - Mesh contains inverted elements, if it is based on a shape, consisting of more than one face (box, cone, torus...) and if the option "Allow Quadrangles (Test)" has been checked before computation.
 - SIGFPE exception is raised after trying to compute a mesh based on a box with "Patch independent" option checked.
- Sometimes regression test bases give unstable results; in this case the testing should be restarted.
- A native VTK can be used only after manual recompilation with the GL2PS component.
- NETGEN 1D-2D and 1D-2D-3D algorithm do not require definition of 2D and 1D algorithms and hypotheses for both mesh and sub-mesh; 2D and 1D algorithms and hypotheses defined with NETGEN 1D-2D or 1D-2D-3D algorithm will be ignored during calculation.
- SALOME in general supports reading of documents from earlier versions but the documents created in the new version may not open in earlier ones. However, some studies may work incorrectly in SALOME 7x; mainly it concerns studies with Post-Pro data in which med v2.1 files have been imported. Due to removal of med v2.1 support and deprecation of Post-Pro module in SALOME series 7x, there can be problems with opening of such studies in SALOME.
- If SALOME modules are not installed in a single folder, SALOME may not work in the CSH shell since the environment variables are too long by default. In this case, it is suggested to use SH or to install all modules in the same folder.
- Compilation of OCCT by Makefiles on a station with NVIDIA video card can cause problems because the installation procedure of NVIDIA video driver removes library `libGL.so` included in package `libMesaGL` from directory `/usr/X11R6/lib` and places this library `libGL.so` in directory `/usr/lib`. However, `libtool` expects to find the library in directory `/usr/X11R6/lib`, which causes compilation failure (See `/usr/X11R6/lib/libGLU.la`). We suggest making symbolic links in that case using the following commands (note: you need root permission to do this):


```
ln -s /usr/lib/libGL.so /usr/X11R6/lib/libGL.so
ln -s /usr/lib/libGL.la /usr/X11R6/lib/libGL.la
```
- Stream lines presentation cannot be built on some MED fields due to limitations in VTK.
- MEFISTO algorithm sometimes produces different results on different platforms.
- In some cases the number of triangles generated by MEFISTO may be different at each attempt of building the mesh.
- When generating a 2D mesh with "Maximum Area" hypothesis used, MEFISTO algorithm can produce cells with maximum area larger than specified by the hypothesis.
- For the current moment, because of the ParaView application architecture limitations, PARAVIS module has the following known limitations:
 - PARAVIS module works unstably using a remote connection; when SALOME is running on a remote computer, activation of PARAVIS module can sometimes lead to the application hang-up.

- PARAVIS module compilation can fail on 64-bit platforms when building ParaMEDCorba plugin (due to crash of kwProcessXML tool during generation of the plugin documentation). In such case it is necessary to unset VTK_AUTOLOAD_PATH environment variable and restart the compilation, for example:
[bash%] unset VTK_AUTOLOAD_PATH
- Loading big files in ParaVis might render SALOME instable. This will be fixed in the next release and can be avoided in the current version by one of the two solutions below:
 - In ParaVis settings (ParaVis tab), disable the use of the external pvserver. This approach has the limitation that it is not possible to execute ParaVis' Python scripts outside the SALOME graphical interface (for instance, from an external terminal).
 - In ParaVis settings (ParaView tab → RenderView tab), increase the amount of memory under "Remote/Parallel rendering options" to something bigger than the default 20 MB (for example 200 MB).
- ParaVis module executes ParaView-related code in the standalone pvserver process that is launched with `--offscreen-rendering` option; this can cause problems with displaying data in ParaVis module if graphic card driver does not support off-screen rendering feature.
- Med library (`medfichier`) can read only MED files of version 2.1 and older.