1. Prerequisites

This document is provided as a guideline regarding hardware configurations, operating system and operating system patches recommended for the use with this level of Abaqus products. Consult the platform support policy for definitions of support terms. For additional details on test configurations, graphics devices, performance, and selected products' compatibility matrices, go to the Dassault Systèmes Home Page (www.3ds.com) and select **Support** → **Hardware and Software** → **(Brand Specific Certifications) SIMULIA.**

Important notices:

- For Windows platforms, Internet Explorer 10 or greater is required for installation and for operation of the 2017 products
- Abaqus 2016 was the last release to be supported on the Red Hat 5 platform.

1 Supported Platforms

The distribution includes the platforms shown below.

OS	Windows 7, 8.1, 10 Professional and Enterprise	Windows Server 2008 R2 SP1, 2012 R2 (with or without HPC Pack)	Red Hat Enterprise Linux Server 6, 7	SuSE Linux Enterprise Server 11, 12
Processor	x86-64 Intel or AMD	x86-64 Intel or AMD	x86-64 Intel or AMD	x86-64 Intel or AMD
C++ Compiler	Visual Studio 2012 Update 5	Visual Studio 2012 Update 5	GCC	GCC
FORTRAN Compiler	Intel® Visual Fortran 16.0 Update 1	Intel® Visual Fortran 16.0 Update 1	Intel® Visual Fortran 16.0 Update 1	Intel® Visual Fortran 16.0 Update 1
MPI and Interconnects	Microsoft MPI	Microsoft MPI and supported interconnects	IBM Platform MPI (supplied) and supported interconnects	IBM Platform MPI (supplied) and supported interconnects
Workload Manager		Windows HPC	IBM Platform LSF	IBM Platform LSF
GPGPU	Select NVIDIA and AMD	Select NVIDIA and AMD	Select NVIDIA and AMD	Select NVIDIA and AMD
Required OS Components (see Notes below)	Internet Explorer 10 or greater	Internet Explorer 10 or greater	Runtime libraries as listed in Notes below	Runtime libraries as listed in Notes below

2 Supported Virtualization

Vendor	Product	Windows
VMware	ESXi	
Microsoft	Hyper-V	
SUSE	XEN and KVM from SUSE Linux Enterprise Server	

2. Platform Support Policy

Definitions of the terms related to the platform support policy are available here.

3 Support Policy for Operating Systems

- Windows
  - Windows 7 Professional SP1 is a Qualified platform
  - Windows 8.1 is a Qualified platform
  - Windows 10 Enterprise, Version 1607 (x64) is a Validated Platform
  - Windows 10 Professional, Version 1607 (x64) is a Compatible Platform
  - Windows 10 Enterprise, Version 1511 (x64) is a Compatible Platform

        - Windows 10 Professional, Version 1511 (x64)is a Compatible Platform
        - Windows 10 Enterprise, Version 1703 (x64) is a Validated Platform
        - Windows 10 Professional, Version 1703 (x64) is a Compatible Platform
        - Windows 10 Enterprise and Professional, Version > 1703 (x64) is a Compatible Platform
- Windows Server
    - Windows Server 2008 R2 SP1 is a Qualified platform
    - Windows Server 2012 R2 is a Validated platform
- Linux*:
    - Red Hat Enterprise Linux Server
        - Red Hat Enterprise Linux Server 6.x, where x=>5, is a Compatible platform
        - Red Hat Enterprise Linux Server 7.1 is a Qualified platform
        - Red Hat Enterprise Linux Server 7.3 is a Qualified platform
        - Red Hat Enterprise Linux Server 7.x, where x=0,2 or x > 3 is a Compatible platform
    - SuSE Linux Enterprise Server
        - SuSE Linux Enterprise Server 11 SP3 is a Validated platform
        - SuSE Linux Enterprise Server 11 SPx, where x>3, is a Compatible platform
        - SuSE Linux Enterprise Server 12 SP1 is a Validated Platform
        - SuSE Linux Enterprise Server 12 SPx, where x=0 or x>1, is a Compatible platform

* Linux platform notes:

- The Abaqus CAD Associative Interfaces for CATIA v5, Pro/ENGINEER, and Solidworks are not supported on the Linux platform.
- For Haswell and newer processors a kernel update may be required. Please see bug number BR10000165399.
- Abaqus/CAE users may see this warning on startup: "/usr/lib64/libjpeg.so.62: no version information available". This message can safely be ignored.
- Red Hat Enterprise Linux 7.4 fix "BZ - 1421155 - Update dynamic loader trampoline for Intel SSE, AVX, and AVX512 usage" introduces a problem with code built using Intel Fortran 2016 Update 1. Please refer to RHBA-2017:3296 for the fix and to bug number BR10000228274 for further details of the problem.

4 Support Policy for MPI and Interconnects

- MPI:
    - Windows (user-supplied):
        - MS MPI 3.x, where x>=0, is Compatible
        - MS MPI 4.x, where x>=0, is Compatible
        - MS MPI 4.2 is Validated
        - MS MPI 5.0 is Qualified
        - Note: If MS MPI is not present on a system, 5.0 will be automatically installed
    - Linux (supplied with the application):
        - IBM Platform MPI 9.1.2 is Qualified
        - Any version of IBM Platform MPI > 9.1.2 is Compatible
        - Intel® MPI 5.0 is Validated
        - Any version of Intel® MPI > 5.1 is Compatible
    - Linux (user-supplied):
        - Cray MPT v7.0.0 and later is Compatible due to binary compatibility with Intel MPI (www.mpich.org/abi). Support is not provided for MPICH as there is no commercial support for this MPI.
- Interconnects:
    - Windows:
        - Infiniband: Mellanox ConnectX VPI (MT26428) - PCIe 2.0 5GT/s, IB QDR / 10GigE Network Adapter with Mellanox driver version 2.1.3.7290 is Qualified
        - GigE, 10GigE with TCP/IP Ethernet driver is Validated
        - On Windows HPC systems, any interconnect solution supported by MS MPI is Compatible
        - See Support for Distributed Memory Parallel Analyses on Windows Platforms for more information on availability of DMP on Windows/X86-64
    - Linux:
        - Infiniband: Mellanox Technologies MT26428 [ConnectX VPI PCIe 2.0 5GT/s - IB QDR] with OFED 3.1-1.0.3 is Qualified

- GigE, 10GigE with TCP/IP Ethernet Driver are Validated
- Any interconnect solution supported by IBM Platform MPI 9.1.2 is Compatible. See the IBM Platform MPI release notes for more information.
- Any interconnect solution supported by Intel MPI is Compatible. See the Intel MPI release notes for more information.

5 Support Policy for Workload Managers

- Windows:
  - Windows HPC Server 2008 R2 SP1 is Qualified
  - All other Microsoft-supported versions of Windows HPC are Compatible
- Linux:
  - IBM Platform LSF 9.1.3 is Qualified
  - All other IBM-supported versions of Platform LSF are Compatible

6 Support Policy for FSI Co-simulation using MpCCI

- MpCCI version 4.4.2 is Qualified. See Fraunhofer SCAI for more information

7 Support Policy for GPGPUs

GPUs with a minimum FP64 rate of 1 TFLOPs double-precision performance are highly recommended. GPGPU computing is not supported on VDI desktops.

- Windows
  - NVIDIA:
    - GPUs that support CUDA compute level 2.0 or greater are Compatible devices
    - Any driver version that supports CUDA 7.5 or greater is Compatible
    - Sample Validated device and driver:
      - Quadro 6000 with driver 354.13
  - AMD - Sample Validated device and driver:
    - AMD FirePro W9100 with driver 14.502.1019
- Linux
  - NVIDIA:
    - GPUs that support CUDA compute level 2.0 or greater are Compatible devices
    - Any driver version that supports CUDA 7.5 or greater is Compatible
    - Sample Validated devices and drivers:
      - Tesla K20C with driver 352.68
      - Tesla K20XM with driver 352.93 and 352.68
      - Tesla K40M with driver 352.39 and 352.99
      - Quadro K6000 with driver 352.55
  - AMD - Sample Validated devices and drivers:
    - AMD FirePro S9000 with driver 15.201.2401
    - AMD FirePro S9150 with driver 15.302.2001

8 Support Policy for Viewing Online Documentation

- To view HTML documentation
- To view PDF documentation
  - Adobe Reader 9.0, 10.0 are Validated platforms
  - Adobe Reader x, where x > 10 is a Compatible platform

9 Notes:

- Runtime Libraries
  - The Intel® MKL 11.3.0.1 runtime math library is included with Abaqus.
  - Windows:
    - For Windows platforms, Internet Explorer 10 or greater is required for installation and for operation of the products
  - Linux: Abaqus requires the following additional libraries that may not be installed with your distribution.
    - libjpeg 6.2 64-bit
    - libstdc++ 4.7 64-bit
    - openmotif 2.3 64-bit (Red Hat and SLES 11)

        - libXm4 (SLES 12)
        - ksh
        - redhat-lsb-core-4.x (Red Hat)
        - lsb-release-2.0 (SuSE)
- Disk Space
    - On Windows 64-bit, a total of 10.4 GB is needed (4.9 GB for the product and 5.5 GB for the HTML and PDF documentation).
    - On Linux 64-bit, approximately a total of 10.2 GB is needed (4.7 GB for the product and 5.5 GB for the HTML and PDF documentation).
- Memory
    - A minimum of 1 GB of free physical memory is required to run Abaqus.
- Graphics
    - For Abaqus/CAE and Abaqus/Viewer, X-Windows is required on Linux platforms. The OpenGL shared library is required on the computer where these products are run.
- Compilers:
    - A C++ or FORTRAN compiler is needed for compiling user subroutines or for building post processing applications (Abaqus make utility).
    - For Windows platforms only, a FORTRAN compiler must also be installed when building user subroutines. See BR10000186112 for more information on this.
    - User-written post processing programs created with the Abaqus make utility should be compiled using the compiler for the program language and linked using a C++ compiler. Therefore, both a FORTRAN and C++ compiler are required for user-written FORTRAN programs.
    - User-written programs that were compiled and linked with the Abaqus make utility in a previous release of Abaqus and processing only the results (.fil) file can still be used with an Abaqus 2016 results file without any change. In this instance no compiler is required.
    - Windows:
        - Intel® Fortran Version 16.0.1 is a Qualified Platform.
        - Intel® Fortran on Windows requires the Microsoft Visual Studio development environment. See the Intel Visual Fortran Pre-requisites for more information.
        - The Microsoft MPI Software Development Kit is required for building user subroutines that utilize MPI based parallelization. See Microsoft MPI v5
    - Linux:
        - Intel® Visual Fortran Version 16.0.1 is a Qualified Platform
        - C++ on Linux:
            - GCC 4.9.2 is a Qualified platform
            - GCC 4.x where x>3 is a Compatible platform
- Input Devices
    - Abaqus/CAE/Viewer provides support for 3DConnexion input devices such as SpacePilot, SpaceExplorer, and SpaceNavigator. Both Windows and Linux platforms are included. For best compatibility, please install the latest 3DConnexion driver and software.

3. Platform support policy for Virtualization

Refer to the "Platform Support Policy for Virtualization for Servers" found in the 3DX Program Directory under **Deployment -> Strategic Platforms -> Servers -> H/W & S/W Requirements**.