Application and Network Performance

OPNET Modeler®
Accelerating Network R&D

17.5 System Requirements

Supported Platforms[1,2]

Vendor	OS
Microsoft	• Windows 7 Professional (32 and 64 bit) • Windows Vista Business (32-bit and 64-bit) • Windows XP Professional (32-bit and 64-bit) • Windows Server 2008 (32-bit and 64-bit) • Windows Server 2003 (32-bit and 64-bit) and Windows Server 2003 R2 (32-bit and 64-bit)
Red Hat	• Red Hat Enterprise Linux 6 (v2.6.32 Linux kernel) • Red Hat Enterprise Linux 5 (v2.6.18 Linux kernel) • Red Hat Enterprise Linux 4 (v2.6 Linux kernel)
Fedora Project	• Fedora Linux 6 (v2.6.18 Linux kernel)

1. OPNET software is supported on the English language version
2. Listed platforms are those supported for the base product. Optional modules may have certain particular platform limitations/requirements. For more information, refer to the entry for the particular module under the "Optional Modules" tab.

System Configuration

CPU	**Required:** 2.0 GHz for Windows, 1.0 GHz for Linux using x86, EM64T, x86 AMD, or AMD64 **Recommended:** 3.0+ GHz using x86, EM64T, x86 AMD, or AMD64 (dual-core))
RAM	**Required:** 512 MB **Recommended[3]:** 1-2 GB
System File Space	**3 GB** *Up to an additional 2 GB of free disk space may be required during installation*
Working File Space	100 MB or more for temporary and log files
Display	**Resolution:** 1024x768 minimum

3. Memory requirements may be greater for large networks and/or large traffic demands.

Required System Patches

Vendor	OS Version	Patch Number/Name
Microsoft	Windows Vista Business	Service Pack 1 is required
	Windows XP Professional	Service Pack 1 is required; Service Pack 2 and Service Pack 3 are supported but not required.
Fedora Project		
Fedora Linux 6 (v2.6.18 Linux kernel)	Patches current as of January 21, 2009 or later	

Other Requirements

Linux

On Linux installations, the license file must be stored on a disk local to the operating system installation (non-network drive) and must be accessible via the /opt/OPNET_license directory name.

Special Requirements (Windows Vista, Windows Server 2008, and Windows 7)

User Account Control (UAC) enabled on Windows Vista, Windows Server 2008, and Windows 7 can restrict user privileges for application software installed in C:\Program Files or C:\Program Files (x86).

To avoid this restriction when UAC is enabled, do one of the following:

- Install OPNET software in a different directory;
- Run OPNET software as the Administrator User; or
- Disable UAC (not recommended by OPNET unless you first check with your local system administrator)

Supporting software

OS	Compiler
Linux	gcc 3.4 or higher
Windows 2000, XP, Vista, 7	• Microsoft Visual Studio .NET 2010 • Microsoft Visual C++ 2010 Express Edition • Microsoft Visual Studio .NET 2008 • Microsoft Visual C++ 2008 Express Edition • Microsoft Visual Studio .NET 2005 • Microsoft Visual Studio .NET 2003 For instructions on configuring Visual Studio 2005, please see FAQ 1685, [*What are the proper system environment settings for Microsoft Visual Studio 2005 compiler to work with release 12.0 or later?*]. Note: OPNET highly recommends the Professional Edition of the Visual C/C++, .NET 2003, or Visual Studio compiler. Using the Standard Edition of the compiler, which does not allow for code optimizations, will result in slower Discrete-Event Simulations.

Note: TCP/IP networking software is required.

Browser

Mozilla Firefox 3.0 or 3.5
Microsoft Internet Explorer 7.0 or 8.0
or a compatible browser that supports style sheets.

Software Compatibility

The following modules are optional for OPNET Modeler:

AppTransaction Xpert

Supported Formats

When performing AppTransaction Xpert studies in OPNET Modeler, larger application trace sizes require more memory for processing. In these situations, adequate system performance may require larger RAM configurations.

Flow Analysis module

When performing Flow Analysis studies in OPNET Modeler, large networks and/or large traffic demands require more memory for processing. In these situations, adequate system performance may require larger RAM configurations.

High Level Architecture (HLA) module

HLA module is compatible with the following RTIs:

- RTI 1.3: DMSO RTI-1.3NGv6, MÄK RTI 2.1 or later, Pitch RTI 2.4.0[4]
- RTI IEEE 1516: MÄK RTI 3.1.2 or later, Pitch RTI 3.2.3

Windows libraries linked with Microsoft Visual Studio .NET 2008 runtime are shipped with the HLA module. Libraries linked with Microsoft Visual Studio .NET 2005 or .NET 2003 runtime are available on demand.

4. Pitch RTI 2.4.0 is only supported on Windows 32-bit platforms.

IPv6 Planning and Operations module

Flow Analysis module and NetDoctor module are pre-requisites for the IPv6 Planning and Operations module.

NetDoctor module

When performing NetDoctor studies in OPNET Modeler, large networks and/or large traffic demands require more memory for processing. In these situations, adequate system performance may require larger RAM configurations.

eXpress Data Import (XDI) module

Network Topology

Device Configuration Import is available for the following devices: Cisco IOS versions 10.0 and above, Cisco CatOS version 4.1 and above, Cisco PIX 6.0 and above, and Juniper JunOS 4.0 and above.

Network Traffic

Product	Version	Notes
HP OpenView Performance Insight	4.6	Import of link loads
InfoVista	2.2, 3.1	Import of link loads
MRTG	2.9.25 or higher	Import of link loads rrdtool-based MRTG is not supported
cflowd	2.1	Import of traffic flows
CA Network Health, and eHealth	4.8, 5.0.2, 5.6.5, 5.7	Import of link loads
NetScout nGenius	2.0, 3.0.1, 3.1, and 3.2	Import of traffic flows Import of sFlow data from Foundry devices and NetFlow data from Cisco devices is supported if this information is gathered by NetScout probes and stored in the nGenius database.
Cisco NetFlow Collector	3.0 to 5.0.2	Import of traffic flows
Fluke Networks OptiView Console	6.5.1	Import of traffic Flows. Only ATM OC3 probe supported

Server Specialized Models

Compatible with import of server monitoring data as follows:

Product	Version	Notes
BMC Patrol Perform	6.5	Import of performance data for servers running on Solaris, HP-UX, AIX, Linux, and Windows 2000/XP
HP OpenView Performance Agent	c.03.42 or later	Import of performance data running on Solaris, HP-UX, AIX, Linux, and Windows 2000/XP
Windows Perfmon	Windows 2000/XP	Import of performance data from workstations running Windows 2000/XP
SAS MXG	SAS: 9.1, MXG: 23.07	Import of performance data for mainframes running z/OS
CA MICS	11.0	Import of performance data for mainframes running z/OS
CA Unicenter NSM	3.1 or 11.0	Import of performance data for servers running Solaris, HP-UX, AIX, Linux, and Windows 2000/XP

3D Network Visualizer (3DNV)

3DNV is supported on Windows 7 Professional (32-bit and 64-bit), Windows Vista Professional (32-bit and 64-bit), Windows XP Professional (32-bit and 64-bit), Windows Server 2008 (32-bit and 64-bit), and Windows Server 2003 (32-bit and 64-bit). Modeler and simulations that communicate with the Visualizer are supported on Windows 7 Professional (32-bit and 64-bit), Windows Vista Professional (32-bit and 64-bit), Windows XP Professional (32-bit and 64-bit), Red Hat Enterprise Linux 4 or 5 (32 bit), or Fedora Linux 6 (32 bit)[5]. Use in the context of HLA co-simulations requires a DMSO-certified 1.3 or 1516 HLA RTI (Run-Time Infrastructure) for each federate. 3DNV counts as a federate separate from a simulation.

Other requirements (when running on a dedicated machine)
CPU: 1 GHz minimum
RAM: 512 MB minimum, 1-2 GB or more if using complex 3D models (such as provided human models)
System File Space: 800 MB (including provided OpenFlight models and terrain databases)
Video Card: OpenGL 2.1-compliant graphics card (NVidia preferred), recommended with 128-bit memory access and 128 MB of VRAM

5. For 3DNV 3.0.0, Modeler and simulations that communicate with the Visualizer are only supported on Windows platforms.

Multi-Federate Logger for 3DNV

Multi-Federate Logger for 3DNV is supported on Windows XP. If used in the context of HLA cosimulations, requires use of a DMSO-certified 1.3 HLA RTI (Run-Time Infrastructure) for each federate. The Logger counts as a federate separate from a simulation.

Other requirements (when running on a dedicated machine)
CPU: 500 MHz minimum
RAM: 64 MB minimum
System File Space: 40 MB

System-in-the-Loop module (SITL)

Use of the System-in-the-Loop module also requires a network interface card.

Use of the SITL module when running discrete event simulations within virtual machines (such as those hosted by VMware or other virtualization platforms) is not supported.

Terrain Modeling module

Compatible with the following terrain data formats:

Format	Notes
OpenFlight v14.3 and higher	Enhanced terrain information for display in the 3D Network Visualizer. Requires use of 3DNV module.
DTED level 0	30 arc seconds by 30 arc seconds spacing.
DTED level 1	3 arc seconds by 3 arc seconds spacing.
DEM (15 minute)	Corresponds to USGS 1:63,360 scale topographic quadrangle map.
DEM (2 arc-second)	Corresponds to 30-minute by 30-minute coverage areas.
DEM (1 degree)	Corresponds to USGS 1:250,000 scale data.

TIREM module

TIREM Module is supported on Windows XP (32-bit and 64-bit), Windows Vista (32-bit and 64-bit), and Red Hat Enterprise Linux 4 and 5 (32-bit and 64-bit).

IT NetMapper module

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