

Minimum Hardware Specifications – Upgrades

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Eclipse™ treatment planning system Hardware

V 11.0

[DELL OS supported upgrade candidates are as follows:

- 2900III update to W2K8 Server x64 with Enterprise only
- 2950III update to W2K8 Server x64 with Standard or Enterprise
- 2970 update to W2K8 Server x64 with Standard or Enterprise

If not, then the option is a new server purchase.]

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Minimum: Eclipse™ treatment planning system Non-Calculation Workstation Requirements

Platform:	<ul style="list-style-type: none"> • DELL® OptiPlex 755 (small form factor)
Processor:	<ul style="list-style-type: none"> • (Single) Intel® Core™ 2 Duo E6550 with VT/2.33GHz,4M,1333MHz FSB
Bus Type:	<ul style="list-style-type: none"> • PCI-E
Memory (RAM):	<ul style="list-style-type: none"> • Eclipse (10.0,11.0): 8GB DDR2 Non-ECC SDRAM,800MHz • Eclipse (8.6, 8.8): 4GB DDR2 Non-ECC SDRAM, 667MHz
Drive Controllers:	<ul style="list-style-type: none"> • SATA-II controller
Hard Drives: Local Storage	<ul style="list-style-type: none"> • ≥ 80GB SATA-II 3.0Gb/s and 8MB Data Burst Cache
Optical Drive:	<ul style="list-style-type: none"> • Internal Slim optical DVD + RW
Video Card/Adapter	<ul style="list-style-type: none"> • 256MB ATI RADEON HD 2400 with DVI output
Monitor	<ul style="list-style-type: none"> • 17" LCD monitor capable of 1280 x 1024 at > 60 Hz • 20" LCD monitor capable of 1600 x 1200 at > 60 Hz. (optional)
Keyboard:	<ul style="list-style-type: none"> • 101-key IBM®-compatible
Mouse:	<ul style="list-style-type: none"> • Microsoft® Windows-compatible 2-button scroll mouse
Network Interface:	<ul style="list-style-type: none"> • 1 LOM 10/100/1000Mbps, compatible with the network operating system and cabling.
Ports:	<ul style="list-style-type: none"> • 1 parallel, 1 serial, minimum 2 USB
Operating System^{[4], [5]}:	<ul style="list-style-type: none"> • Eclipse (10.0,11.0): Windows XP Professional SP2 (64-bit only) • Eclipse (8.6, 8.8): Windows XP Professional SP2 & SP3 (32-bit and 64-bit)
Windows® MUI Packs:	<ul style="list-style-type: none"> • XP Pro Multilingual User Interface License and MUI Software CD for • XP Operating System (International Purchase Option)

Microsoft Windows Installer:	<ul style="list-style-type: none"> • 3.1
File System:	<ul style="list-style-type: none"> • NT File System (NTFS)
Windows® OS Architecture:	<ul style="list-style-type: none"> • 64-bit
Microsoft® .NET Framework:	<ul style="list-style-type: none"> • Eclipse (8.6, 8.8, & 10.0,11.0): 1.1, 2.0, 3.0, and 3.5
Peripherals	<ul style="list-style-type: none"> • Digitizer: Minimum of 4000 lines per inch with either USB or RS-232 Serial Interface connectivity • Printer: 64-bit Windows XP or 64-bit Windows 7 compatible network printer with minimum of 48 MB RAM, USB 2.0, Ethernet or wireless connectivity, and 1200x600 dpi b&w and color printing capability.

Notes:

1. Customers, who require the use and access of EclipseSV version 11.0 from an ARIA version 11.0 workstation, must use the Eclipse version 11.0 hardware specifications instead of the "ARIA for Radiation Oncology Information System (OIS) Workstation" specification.
2. Windows® Vista® is not a validated operating system for Eclipse Version 11.0.
3. Other qualified operating system for Eclipse v10 & v11 is Windows 7(64 bit only).
4. Client workstations usually do not require uninterruptible power supplies. However, they may be needed in areas that experience frequent brown outs or brief power drop outs.
5. Eclipse and Eclipse SV hardware is provided by Varian as a software/hardware package.
6. Specifications subject to change without notice as newer computer models become available.

Minimum: Eclipse™ treatment planning system Dose Calculation Workstation Requirements

Platform:	<ul style="list-style-type: none"> • DELL® Precision 490 (mini-tower form factor)⁶
Processor:	<ul style="list-style-type: none"> • (Dual or Single-Europe Only) Intel® Xeon™ 5150 with VT/2.66GHz,4M,1333MHz FSB
Bus Type:	<ul style="list-style-type: none"> • PCI-E
Memory (RAM):	<ul style="list-style-type: none"> • Eclipse (10.0,11.0): 16GB DDR2 Non-ECC SDRAM,800MHz • Eclipse (8.6, 8.8): 4GB DDR2 Non-ECC SDRAM, 667MHz
Drive Controllers:	<ul style="list-style-type: none"> • SAS 5i/r PCI-E card or SATA-II controller
Hard Drives: Local Storage	<ul style="list-style-type: none"> • ≥ 73GB SAS 3.0Gb/s and 8MB Cache or 250GB SATA-II 3.0Gb/s and 8MB Data Burst Cache (Europe Only)
Optical Drive:	<ul style="list-style-type: none"> • Internal optical DVD + RW
Video Card/Adapter	<ul style="list-style-type: none"> • 256MB nVidia Quadro FX 3500 with dual DVI output or 256MB ATI Radeon x1950 with dual DVI output (Europe only)
Monitor	<ul style="list-style-type: none"> • 17" LCD monitor capable of 1280 x 1024 at > 60 Hz • 20" LCD monitor capable of 1600 x 1200 at > 60 Hz. (optional)
Keyboard:	<ul style="list-style-type: none"> • 101-key IBM®-compatible
Mouse:	<ul style="list-style-type: none"> • Microsoft® Windows-compatible 2-button scroll mouse
Network Interface:	<ul style="list-style-type: none"> • 1 LOM 10/100/1000Mbps, compatible with the network operating system and cabling.
Ports:	<ul style="list-style-type: none"> • 1 parallel, 1 serial, minimum 2 USB
Operating System^{[4], [5]}:	<ul style="list-style-type: none"> • Eclipse (11.0): Windows XP Professional SP2 (64-bit only) • Eclipse (10.0): Windows XP Professional SP2 (64-bit only) • Eclipse (8.6, 8.8): Windows XP Professional SP2 & SP3 (32-bit and 64-bit)
Windows® MUI Packs:	<ul style="list-style-type: none"> • XP Pro Multilingual User Interface License and MUI Software CD for XP Operating System (International Purchase Option)
Microsoft Windows Installer:	<ul style="list-style-type: none"> • 3.1

File System:	<ul style="list-style-type: none"> • NT File System (NTFS)
Windows® OS Architecture:	<ul style="list-style-type: none"> • 64-bit
Microsoft® .NET Framework:	<ul style="list-style-type: none"> • Eclipse (8.6, 8.8, & 10.0,11.0): 1.1, 2.0, 3.0, and 3.5
Peripherals	<ul style="list-style-type: none"> • Digitizer: Minimum of 4000 lines per inch with either USB or RS-232 Serial Interface connectivity • Printer: 64-bit Windows XP or 64-bit Windows 7 compatible network printer with minimum of 48 MB RAM, USB 2.0, Ethernet or wireless connectivity, and 1200x600 dpi b&w and color printing capability.

Notes:

1. Windows® Vista® is not a validated operating system for Eclipse Version 11.0.
2. Client workstations usually do not require uninterruptible power supplies. However, they may be needed in areas that experience frequent brown outs or brief power drop outs.
3. Eclipse v10 & v11 are also qualified on Windows 7(64-bit Only)
4. Eclipse v11 is **not** qualified on Windows XP (32 or 64 bit) in 'standalone mode' (e.g. a single Eclipse workstation also hosting the DB)
5. Eclipse and Eclipse SV hardware is provided by Varian as a software/hardware package.
6. Specifications subject to change without notice as newer computer models become available.
7. AcurosXB and RapidArc algorithms are not supported on this hardware.

Minimum: Eclipse™ treatment planning system Dose Calculation Workstation Requirements w RapidArc and/or AcurosXB

Platform:	<ul style="list-style-type: none"> • DELL® Precision T5400 (mini-tower form factor)⁶
Processor:	<ul style="list-style-type: none"> • Dual Quad-Core Intel Xeon E5420 @ 2.5GHz
Bus Type:	<ul style="list-style-type: none"> • PCI-E
Memory (RAM):	<ul style="list-style-type: none"> • Eclipse (8.6, 8.8): 4GB DDR2 Non-ECC SDRAM, 800MHz • Eclipse (10.0,11.0): 16GB DDR2 Non-ECC SDRAM,800MHz
Drive Controllers:	<ul style="list-style-type: none"> • Intel Onboard SATA-II controller
Hard Drives: Local Storage	<ul style="list-style-type: none"> • Dual 160GB SATA-II 3.0Gb/s or Dual 250GB SATA-II 3.0Gb/s and 8MB Data Burst Cache (Europe Only)
Optical Drive:	<ul style="list-style-type: none"> • Internal optical DVD + RW
Video Card/Adapter	<ul style="list-style-type: none"> • 256MB nVidia Quadro FX 570 with dual DVI output
Monitor	<ul style="list-style-type: none"> • 17" LCD monitor capable of 1280 x 1024 at > 60 Hz • 20" LCD monitor capable of 1600 x 1200 at > 60 Hz. (optional)
Keyboard:	<ul style="list-style-type: none"> • 101-key IBM®-compatible
Mouse:	<ul style="list-style-type: none"> • Microsoft® Windows-compatible 2-button scroll mouse
Network Interface:	<ul style="list-style-type: none"> • 1 LOM 10/100/1000Mbps, compatible with the network operating system and cabling.
Ports:	<ul style="list-style-type: none"> • 1 parallel, 1 serial, minimum 2 USB
Operating System^{[4], [5]}:	<ul style="list-style-type: none"> • Eclipse (11.0): Windows XP Professional SP2 (64-bit only) • Eclipse (10.0): Windows XP Professional SP2 (64-bit only) • Eclipse (8.6, 8.8): Windows XP Professional SP2 & SP3 (32-bit and 64-bit)
Windows® MUI Packs:	<ul style="list-style-type: none"> • XP Pro Multilingual User Interface License and MUI Software CD for XP Operating System (International Purchase Option)
Microsoft Windows	<ul style="list-style-type: none"> • 3.1

Installer:	
File System:	<ul style="list-style-type: none"> • NT File System (NTFS)
Windows® OS Architecture:	<ul style="list-style-type: none"> • 64-bit
Microsoft® .NET Framework:	<ul style="list-style-type: none"> • Eclipse (8.6, 8.8, & 10.0,11.0): 1.1, 2.0, 3.0, and 3.5 • Eclipse (11.0): 4.0
Peripherals	<ul style="list-style-type: none"> • Digitizer: Minimum of 4000 lines per inch with either USB or RS-232 Serial Interface connectivity • Printer: 64-bit Windows XP or 64-bit Windows 7 compatible network printer with minimum of 48 MB RAM, USB 2.0, Ethernet or wireless connectivity, and 1200x600 dpi b&w and color printing capability.

Notes:

1. Windows® Vista® is not a validated operating system for Eclipse Version 11.0.
2. Client workstations usually do not require uninterruptible power supplies. However, they may be needed in areas that experience frequent brown outs or brief power drop outs.
3. Eclipse v10 & v11 are also qualified on Windows 7(64-bit Only)
4. Eclipse v11 is **not** qualified on Windows XP (32 or 64 bit) in 'standalone mode' (e.g. a single Eclipse workstation also hosting the DB).
5. Eclipse and Eclipse SV hardware is provided by Varian as a software/hardware package.
6. Specifications subject to change without notice as newer computer models become available.

Minimum: Eclipse™ FAS Server Requirements - Rack Mounted

Platform:	<ul style="list-style-type: none"> Dell PowerEdge 1950 III
Processor:	<ul style="list-style-type: none"> Dual Intel Xeon E5420, 3.0 GHz, 12M L2 Cache, 1333 MHz FSB
Bus Type:	<ul style="list-style-type: none"> PCI-E
Memory (RAM):	<ul style="list-style-type: none"> Eclipse (10.0,11.0) : 16 GB DDR2 Eclipse (8.8): 4 GB DDR2
Hard Drives: (Local Storage)	<ul style="list-style-type: none"> 2x73 GB 10K SAS
Drive Controller:	<ul style="list-style-type: none"> SAS 6/iR
Optical Drive:	<ul style="list-style-type: none"> 8X DVD +/- RW
Video Card/Adapter	<ul style="list-style-type: none"> Embedded ATI ES1000 with 16MB Memory
Network Interface:	<ul style="list-style-type: none"> Dual LOM 10/100/1000Mbps, compatible with the network operating system and cabling.
Ports:	<ul style="list-style-type: none"> Minimum 2 USB
Operating System:	<ul style="list-style-type: none"> Eclipse (10.0,11.0): Windows Server 2008 R1 Eclipse (8.8): Windows Server 2003
File System:	<ul style="list-style-type: none"> NTFS
Windows® OS Architecture:	<ul style="list-style-type: none"> Eclipse (10.0,11.0): 64 bit Eclipse (8.8): 32 bit
Microsoft® .NET	<ul style="list-style-type: none"> Eclipse (8.8, & 10.0,11.0): 1.1, 2.0, 3.0, and 3.5

Framework:	<ul style="list-style-type: none"> Eclipse 11.0: 4.0
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NOTES:

1. Software RAID is neither recommended nor supported with the TPS FAS Server.
2. Hardware used should be approved based on the current Microsoft® Windows Catalog Listing.
3. Other compatible Windows® operating systems for Eclipse (11.0) include: Windows Server 2008 R2 SP2 (Standard or Enterprise) 64-bit only.
4. Windows Server 2008 R2 is currently **not** compatible with the Eclipse (10.0) TPS Server.
5. Specifications subject to change without prior notification.

Minimum: Eclipse™ TPS Server Requirements

Processor:	(Single) Intel® Quad Core Xeon Processor with 2x6MB Cache, 2.83GHz, 1333MHz FSB or better
Bus Type:	PCI-E
Memory: (RAM)	4 GB Fully Buffered DIMM'S at 667MHz Single Ranked; or greater
Hard Disk:	4x146 GB Hot Swap drives with SAS interface (includes online spare). Drives should have < 10ms access time at 10 000 RPM. Effective disk space is ~292 GB.
Drive Controller:	Dual channel SAS 3.0Gb/s RAID ^[1] controller with ≥ 256 MB cache. Configured for hardware RAID 5 fault tolerance and read/write cache (50/50) enabled. CD and LTO tape should operate from channel 2 of this controller or a separate controller.
Floppy Disk:	3.5" drive, 1.44 MB
Optical Drive: (CD / DVD)	Multisession 24X CD-RW and DVD-ROM combo drive.
Backup Tape:	LTO-3 400/800 GB internal tape drive; BrightStor™ ARCserve® 11.5 or later.
Network Interface:	1 LOM 100/1000 Mbps, compatible with the network operating system and cabling.
Redundancy:	PSU and Fans
Ports:	1 serial, minimum 2 USB
Operating System:	Eclipse (8.6, 8.8, 10.0, 11.0) ^{[3], [4], [5], [6]} : Windows Server® 2003 R2 (Standard or Enterprise) with Service Pack 2 (25 client access license or sufficient seat licenses).
File System:	NTFS

Windows® OS Architecture	32-bit
Microsoft® .NET Framework	Eclipse(8.6, 8.9, 10.0,11.0): 1.1, 2.0, 3.0, and 3.5 Eclipse (11.0): 4.0

NOTES:

1. Software RAID is neither recommended nor supported with the TPS File Server.
2. Hardware used should be approved based on the current Microsoft® Windows Catalog Listing.
3. Other compatible Windows® operating systems for Eclipse (11.0) include: Windows Server 2008 R1 (Standard or Enterprise) , R2 (Standard or Enterprise) with Service Pack 2, 64-bit only.
4. Other compatible Windows® operating systems for Eclipse (10.0) include: Windows Server 2008 R1 (Standard or Enterprise) with Service Pack 2, 64-bit only.
5. Windows Server 2008 R2 is currently **not** compatible with the Eclipse (10.0) TPS Server.
6. TPS Server hardware must be confirmed with the OEM vendor as compatible for Windows Server 2008 R1 (x64) or Windows Server 2008 R2 (x64) when considering upgrading the OS and upgrading the memory (24 GB RAM).
7. 1 Gbps network recommended for maximum speed and performance.
8. Specifications subject to change without prior notification.
9. Additional hard disk space may be required with newer capabilities; customer's IT/S staff shall review backup means and schedule.

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