

NODE™ Technical Specifications



Node™ is the server that hosts Brainlab treatment planning software. This document contains all necessary information to understand, prepare and integrate Node™ servers in the hospital environment and clinical routine.

HP DL360p Gen 9

CPU :	2x Intel Xeon E5-2643v4 (3,4GHz Baseclock, 3,7GHz Turbo)
Chipset:	Intel C610 Chipset Series
RAM:	ECC DDR4 64GB (8x8 GB)
HDD:	3x 600 GB SAS hot-plug HDD 10.000 RPM, (1.2 TB total HDD capacity)
RAID:	RAID 5 flash buffered write cache (4 GB)
Graphics:	NVIDIA PNY Quadro M2000 4GB GDDR5 Memory
LAN:	4x1GBE Quad Port Gigabit Server Adapter
Fiber:	1x10GBE SFP Adapter (HP 560FLR) with HP BLc 10G SFP+ SR Transceiver
HW Monitoring:	iLO4 Standard
DVD:	1x DVD writer for data archiving
Operating System:	Windows Server 2012 R2 Standard, 64 bit
Power Supply:	Dual 800 W power supply (hot-plug) for redundancy
Concurrent planning sessions:	allows up to 3

DIMENSIONS

1U 19" Rack mount with telescopic rails

Height:	4.32 cm (1.7")
Width:	43.47 cm (17.11")
Length:	69.85 cm (27.5")
Weight:	15.31 kg (33.3 lb)

IMPORTANT: Node Server Hardware is an application server. It is not intended to provide a solution for PACS, data backup or long term data storage.

HOSPITAL ENVIRONMENT REQUIREMENTS

Client Computer

Minimum		Recommended	
OS	Windows XP/SP 3 or newer MAC OS X 10.11 or newer	OS	Windows 7 or newer
CPU/RAM	1GHz, 512 MB	CPU/RAM	2 GHz, 2GB
Display Resolution	1280x1024 landscape	Display Resolution	1920x1200 landscape
Display Color depth	24 bit	Display Color depth	32 bit
Browsers for HTML5 connection	IE version: >8 Safari version: > 9 Chrome version: > 48 Firefox version: > 45	Browsers for RDP connection	IE 8.x or newer, RDP client 7.0 or newer and ActiveX control enabled for Origin server URL

Tablets

- iPad with iOS 8.4 or higher
- Display resolution: 1024x768 or higher
- HTML5 compatible web browser (recommended for full screen capability: e.g. Safari)

Hospital Network

- Existing LAN with minimum 100 Mbit/s bandwidth speed and less than 50ms latency
- For wireless client connection: Wireless LAN must be provided by the hospital
- Installation required in an air-conditioned IT industrial standard environment (max 35 °C)
- Data storage solution for long term archiving
- Recommended existing Windows Domain (mandatory only for server clusters in load balancing)
- The following Domain Policies shall be disabled for the Node server:

GPO	Windows 2012 Servers - General	Windows 2012 Servers - General
Policy	@wsecedit.dll,-59090	@appinfo.dll,-203
Value Name	MACHINE\Software\Policies\Microsoft\Windows\... Safer\CodeIdentifiers\AuthenticcodeEnabled	MACHINE\Software\Microsoft\Windows\.. CurrentVersion\Policies\System\EnableLUA
Computer Setting	0	0