Unlock a better EHR experience with the right hardware solutions

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Give your EHR the performance it deserves

Healthcare organizations invest considerable resources when implementing an EHR platform: capital outlay, staff education, and maintenance, to name a few. You need technology solutions and systems compatible with your platform to increase ROI, improve efficiency, and help deliver better patient care.

Lenovo Health solutions complement your Epic EHR system to maximize your investment. Our innovative, customized endpoint and data center solutions are compatible with the standards and criteria of EHR systems, like Epic, used by the majority of care delivery organizations. They deliver the seamless integration that helps improve patient engagement and clinician experience.

POWERING THE FUTURE

With the introduction of Hyperdrive, Epic is evolving and improving on today's EHR systems. Hyperdrive is a web-based framework built from the ground up to replace Epic's Hyperspace application client. Lenovo is working with Epic to ensure that healthcare organizations thrive today and are ready for what's ahead. We have a range of solutions to enable your Epic environment.

Hardware guidelines for Hyperdrive

As healthcare systems begin to access hyperspace via the hyperdrive browser, it's important to make sure your hardware meets the new application's requirements.* Whether you are purchasing new hardware or accessing hyperspace on existing devices, following Epic's recommendations will ensure system compatibility and performance. The solutions featured in the following pages meet these guidelines.

IF YOU ARE PURCHASING NEW HARDWARE FOR AN ENDPOINT INSTALL OF HYPERDRIVE

Processor

- Current gen Intel® Core™ processor with minimum 4 cores @3.6 GHz max turbo frequency or greater
- AMD Ryzen 5 or 7 PRO 7000 series processor with minimum 4 cores @4.2 GHz max boost frequency or greater, for example: Ryzen 5 PRO 4650G or Ryzen PRO 5650G

Memory

Minimum 16GB

Display

24" FHD 16:9 or 16:10 monitor

Network

Wired gigabit ethernet or 802.11ac Wi-Fi or better

IF YOU ARE USING EXISTING HARDWARE FOR AN ENDPOINT INSTALL OF HYPERDRIVE

AMD systems

AMD Ryzen 5 or 7 PRO 3000 series or later generation processor with minimum 4 cores @4.2 GHz max boost frequency or greater

Intel systems

Current gen Intel® Core™ processors or higher with minimum 4 cores @3.6 GHz max turbo frequency or greater**

* For details, see these documents on Epic Galaxy:
Epic Workstation Purchasing Guidelines
End User Hardware Considerations

** Some older processors are not certified for Windows 11

Desktop workstations for an endpoint install of Hyperspace or Hyperdrive

GOOD	MODEL	PROCESSOR	MEMORY	DISPLAY	ADDITIONAL FEATURES
	ThinkCentre M75q Tiny	AMD Ryzen 5 PRO or greater (for Hyperdrive)	8GB min, 16GB rec	1920x1080 or 1920x1200	• Support up to 3 monitors • Add USB ports and lock/restrict them • Power remotely from keyboard

BETTER	MODEL	PROCESSOR	MEMORY	DISPLAY	ADDITIONAL FEATURES
	ThinkCentre M70q Tiny	Intel i5 current gen	8GB min, 16GB rec	1920x1080 or 1920x1200	• Support up to 4 monitors • Add USB ports and lock/restrict them • Power remotely from keyboard

BEST	MODEL	PROCESSOR	MEMORY	DISPLAY	ADDITIONAL FEATURES
	ThinkCentre M80q/M90q Tiny	Intel i5 current gen	8GB min, 16GB rec	1920x1080 or 1920x1200	• vPro/AMT system • Support up to 4 monitors • Add USB ports and lock/restrict them • Power remotely from keyboard

PREFERRED DISPLAY

ThinkCentre Tiny-in-One (24″ or 27″, touch or non-touch)

The Tiny-in-One monitor turns the ThinkCentre Tiny into an all-in-one computer with removable compute module and connects a camera, speakers, and microphone internally for a cable-free, streamlined footprint.

USE CASES

- Patient registration and billing
- Diagnostic radiology
- In-room patient care
- Mobile medical carts
- Wall or swing arm mounted workstation
- Traditional desktop or communal station

Mobile solutions for an endpoint install of Hyperspace or Hyperdrive

GOOD	MODEL	PROCESSOR	MEMORY	DISPLAY	ADDITIONAL FEATURES
	ThinkPad L14	Current gen Intel i5 or AMD Ryzen Pro	8GB min, 16GB rec	1920x1080	• 14″ screen • Optional touchscreen
	ThinkPad L16	Current gen Intel i5 or AMD Ryzen Pro	8GB min, 16GB rec	1920x1080	• 16″ screen • Optional touchscreen

BETTER	MODEL	PROCESSOR	MEMORY	DISPLAY	ADDITIONAL FEATURES
	ThinkPad T14 and T14s	Current gen Intel i5 or AMD Ryzen Pro	8GB min, 16GB rec	1920x1200	• Lightweight 14″ screen • Optional touchscreen • Privacy guard screen
	ThinkPad T16	Current gen Intel i5 or AMD Ryzen Pro	8GB min, 16GB rec	1920x1200	• Lightweight 16″ screen • Optional touchscreen • Optional privacy guard screen

BEST	MODEL	PROCESSOR	MEMORY	DISPLAY	ADDITIONAL FEATURES
	ThinkPad X1 Carbon	Current gen Intel i5	16GB or higher	1920x1200	• Super lightweight 2.4 lb. • 14″ screen • Optional touchscreen
	ThinkPad X1 Yoga	Current gen Intel i5	16GB or higher	1920x1200	• Convertible 2-in-1 tablet unit with pen • Standard touchscreen
	ThinkPad P1	Current gen Intel i5	16GB or higher	1920x1200	• Ultra-high performance lightweight notebook • Optional touchscreen

Lenovo

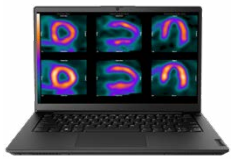
USE CASES

Mobile medical carts

Clinician rounding

Consider thin clients

Optimize device management, address hybrid work environments, and improve endpoint security.

	MODEL	PROCESSOR	MEMORY	DISPLAY	ADDITIONAL FEATURES
	ThinkCentre M75q Tiny, IGEL certified	AMD Ryzen 3 PRO or greater	4GB or higher	1920x1080 or 1920x1200 **RECOMMENDED DISPLAY:** ThinkCentre Tiny-in-One (24″ or 27″, touch or non-touch)	• Thin client desktop — AMD
	ThinkCentre M70q Tiny, IGEL certified	Intel i3 or better	4GB or higher	1920x1080 or 1920x1200 **RECOMMENDED DISPLAY:** ThinkCentre Tiny-in-One (24″ or 27″, touch or non-touch)	• Thin client desktop — Intel
	Lenovo K14 AMD laptop, IGEL certified	AMD Ryzen 3 PRO or greater	4GB or higher	1920x1080 IPS screen	• Cost-effective thin client laptop

USE CASES

- Hybrid care environments
- Nurses' stations
- Managing field physician groups
- Offices and clinic rooms
- Telemedicine or call centers
- Reception and self-check-in kiosks
- Patient rooms
- Labs and clean rooms

Home health mobile solutions

	MODEL	PROCESSOR	MEMORY	DISPLAY	ADDITIONAL FEATURES
	ThinkPad L16	Current gen Intel i5 or AMD Ryzen Pro	4GB or higher	1920x1080 IPS screen	• Optional LTE radio • Optional touchscreen
	ThinkPad T16	Current gen Intel i5 or AMD Ryzen Pro	8GB min, 16GB rec	1920x1200	• Lightweight 16″ screen • Optional touchscreen • Optional privacy guard screen
	ThinkPad L13 Yoga	Current gen Intel i5 or AMD Ryzen Pro	8GB min, 16GB rec	1920x1080	• Convertible 2-in-1 tablet unit with pen • Standard touchscreen • Optional LTE radio

USE CASE

Nurse in patient's home

Tablets, smartphones, and Epic apps

TABLETS

	MODEL	PLATFORM	MEMORY	DISPLAY
	Lenovo Tab P12 Pro	Android	8GB	12.6″ AMOLED
	Lenovo Tab P11 Plus	Android	4GB	11″ 2K
	Lenovo Tab K10	Android	3GB to 4GB	10.3″ FHD
	Lenovo Tab M11	Android	3GB to 4GB	10.6″
	ThinkPad X12	Windows 10 or 11 Pro	Minimum 16GB	12.3″ FHD+
	ThinkPhone by Motorola	Android	8GB	6.6″ pOLED FHD+

ANDROID-BASED APPS*

- Welcome
- MyChart Mobile
- MyChart Bedside
- Haiku
- Rover

* MyChart Mobile, MyChart Bedside, Haiku, and Rover are trademarks of Epic Systems Corporation.

USE CASES

- Reception and self-check-in kiosks
- In-room communication and patient concierge
- Mobile patient care
- Digital signage
- Room placard

THINKPAD'S PERFECT COMPANION

Expand your mobile workspace. ThinkPhone seamlessly connects with your PC and integrates Android and Microsoft Windows experiences.

Optimize your EHR system with the right infrastructure

When implementing Epic or refreshing the hardware you run it on, end-user devices are only part of the story. Your data center and back-end infrastructure are critical components of an EHR platform.

Lenovo infrastructure solutions deliver the extreme reliability, simplified management, and enhanced security hospitals of all sizes demand. Our expert healthcare team consults with you to ensure the optimal platform for your Epic environment to balance performance, capability, and cost.

High-level Epic layout

END USER-FACING INFRASTRUCTURE

BACK-END INFRASTRUCTURE

PRESENTATION LAYER

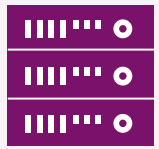
VDI platforms running on 2-socket (2S) systems

- Available in Intel or AMD platforms
- Scales as number of clinician users grows
- Runs other clinical SW (PACS, labs, pharmacy)
- Hyperconverged infrastructure, controller-based storage, or a mix

RELATIONAL DATABASE

Clinical data analysis

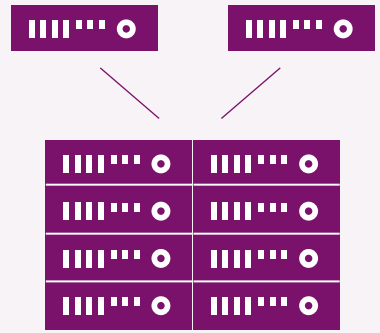
- Available in Intel or AMD platforms
- 2S systems



WEB & INTEGRATION SERVICES

Data integrations to other clinical data systems

- Available in Intel or AMD platforms
- 2S systems



OPERATIONAL DATABASE

Store of all clinical data

- Scaled based on beds, engagements, and clinical workflows
- Available in 2S Intel or AMD platforms
- Available in 4S or 8S Intel or AMD platforms

Getting started step by step

Choosing the right platform for your EHR system is a complex decision. Lenovo is here to help you meet the specific goals that provide optimal return on your investment. Here's the step-by-step process to help get you there.

1 DETERMINE YOUR SIZING AND HARDWARE CONFIGURATIONS.

As you meet with your Epic representative, consider these hardware questions. They will help determine your capacity requirements.

- Does your current infrastructure meet your Epic needs today and allow for scaling?
- Is your organization increasing bed count, services, or patient capacity?
- Are you looking to optimize your Epic platform around performance, capacity, or infrastructure licensing?
- Will you be adopting more Epic modules?

2 CONSULT WITH YOUR LENOVO HEALTH TEAM.

Our experts will provide guidance to ensure your investment in infrastructure best suits your hospital size, Epic usage, growth plans, and clinical and business objectives.

To better understand your unique needs, our experts will work with you to evaluate the hardware configuration guidance provided by Epic. Our teams help ensure your investment in infrastructure best suits your hospital size, Epic usage, growth plans, budgets, and clinical and business objectives.

3 SELECT FROM MULTIPLE OPTIONS FOR EACH SYSTEM COMPONENT.

- **Operational database (ODB).** Lenovo supports Intel platforms in 2-socket, 4-socket, and 8-socket systems and AMD platforms in 2-socket systems.
- **Relational database (RDB).** Lenovo supports 2-socket platforms powered by Intel or AMD.
- **Presentation layer.** Lenovo supports 1U and 2U 4th Gen Intel and AMD processors in either our hyperconverged infrastructure (on Lenovo ThinkAgile platforms) or Lenovo ThinkSystem servers connected to controller-based storage or a mix.

Lenovo ThinkAgile and ThinkSystem platforms support a number of hypervisors, including VMware, Nutanix, and Microsoft.

Lenovo Health services and support

Lenovo is an end-to-end partner delivering hardware, software, and services from pocket to cloud over the entire technology lifecycle. We provide expertise and services at every stage — from strategy to procurement, deployment to operations, and support through end of life.

PLAN

Solution design engagement
Custom imaging
Image management
Asset tagging
Custom BIOS settings
IT onboarding documents

DEPLOY

Staff augmentation
Advanced stocking
Project management services
Unified endpoint management

OPERATE

Accidental Damage Protection
Keep Your Drive
Sealed Battery Protection
Self-Maintainer Program
Premier Support
Lenovo Device Intelligence
Physical Device Security
Lenovo TruScale
- Infrastructure as a Service
- Device as a Service

Managed Services

DISPOSE

Asset Recovery Services
Payment for recovered hardware
DoD certified data destruction

AN INCREASINGLY POPULAR WAY TO BUY TECHNOLOGY

Lenovo TruScale Everything as a Service offers both Device and Infrastructure as a Service, ensuring your teams always have the most innovative, up-to-date technology. You get simplified access to our entire portfolio with flexible, scalable solutions, worry-free management, predictable costs, and a single point of contact.

A MODERN HEALTHCARE ENVIRONMENT INCLUDES AI READINESS

The use of artificial intelligence in healthcare is increasing. We support the development of AI technologies and their benefits for patient outcomes, clinical workflows, and research breakthroughs. We are also committed to being a trusted source for responsible, ethical, and secure AI.

We offer:

- AI readiness assessment and deployment
- Lenovo AI Discover Center of Excellence
- AI Discover workshops
- Solutions from our AI Innovators program partners, including patient telemetry, computer vision for monitoring patient health and safety, and machine learning for radiology diagnostics

Need more information to determine the best options for your organization? We're here to help. Consult with your sales representative to find the right Lenovo Health solutions for your Epic implementation.

www.lenovo.com/healthcare

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Epic

Smarter technology for all

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