

The background features a vibrant, multi-colored abstract design. On the left, there are overlapping, wavy bands of color in shades of red, orange, yellow, and green. On the right, a bright white light source emits a series of sharp, radiating lines in various colors, including blue, green, and yellow, creating a sunburst effect.

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The bridge to possible

Healthcare's Digital Tsunami

Why the future of smart hospitals depends on IT

Troy Yoder, Global Healthcare Leader

PSOIND-1008

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<https://ciscolive.ciscoevents.com/ciscolivebot/#PSOIND-1008>

Agenda

- IT/OT convergence
- uPoE emergence
- Sustainability meets security
- Three steps to securing healthcare enterprises
- Benefits of preparing today

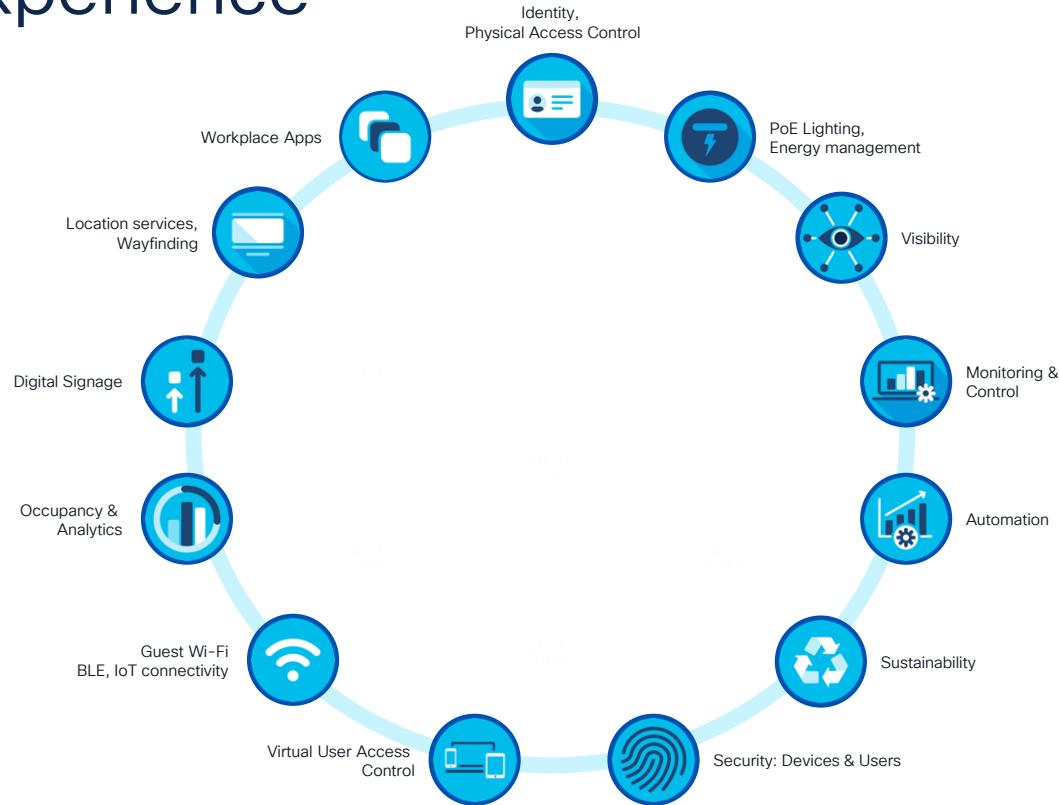
Healthcare IT is getting more complex ...



Connected hospital VR tour



Convergence – operational enablement and patient experience



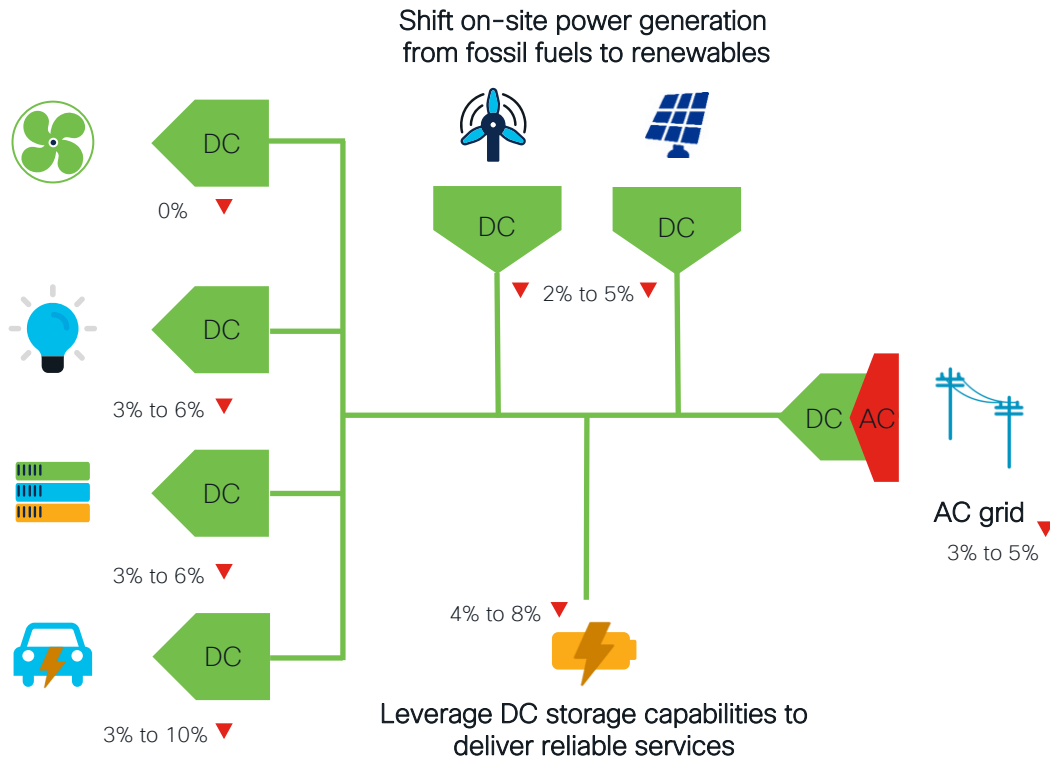
Convergence – operational enablement and patient experience



Smart hospitals can save energy and cost less to operate

Up to **20%** of power is wasted in conversion loss, even the most efficient transformers lose 10%¹

Over **45%** less energy waste using PoE with DC energy systems²



1. Department of Energy, CTR, Ch 5, Section 5.6.5 (DC Systems)

2. <https://www.csagroup.org/wp-content/uploads/CSA-Group-Research-DC-Microgrids-In-Buildings.pdf>

Convergence, operational enablement and patient experience

Building or retrofitting healthcare facilities



Estimated
4,000lbs of
steel conduit
removed



Estimated 265lbs
of copper removed



Estimated \$3/sf saved
in materials and labor



5-20% faster install

Ongoing operations



Commute savings for
employees



Estimated 5-30
MWhr energy
saved annually¹



Up to \$4K saved
annually in energy
utilities bills



Achieve LEED
Platinum & WELL
Standards

Data per 25,000 sq. ft.

How fast is the technology changing?

Power, connect, see, secure and segment

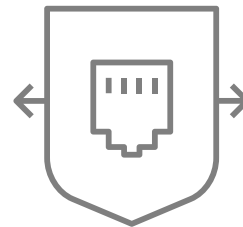
Class 2/3 Standard



Mature, safe, and accepted low voltage solution since 2014

UPoE+

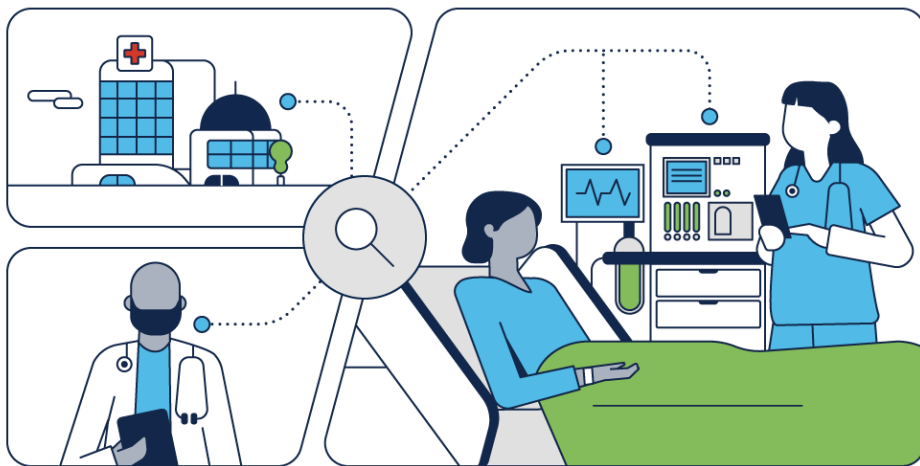
One cable



Providing efficient power, connect and secure facilities infrastructure

CAT6

The digital tsunami has begun



From

15-20

connected devices per
hospital room

to

30-40

connected devices per
hospital room

Drive security resilience

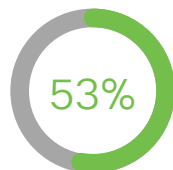
The acceleration of digital technologies, IoT, IoMT and medical devices creates increased risk across the threat landscape



individuals were affected by healthcare cyber attacks in 2021, up from 34 million in 2020.¹



Increase in ransomware attacks on hospitals in the last year²



of connected medical and other IoT devices in hospitals have a known critical vulnerability³

Cybersecurity framework



VPN+MFA



NGFW



Network visibility



Policy



Microsegmentation



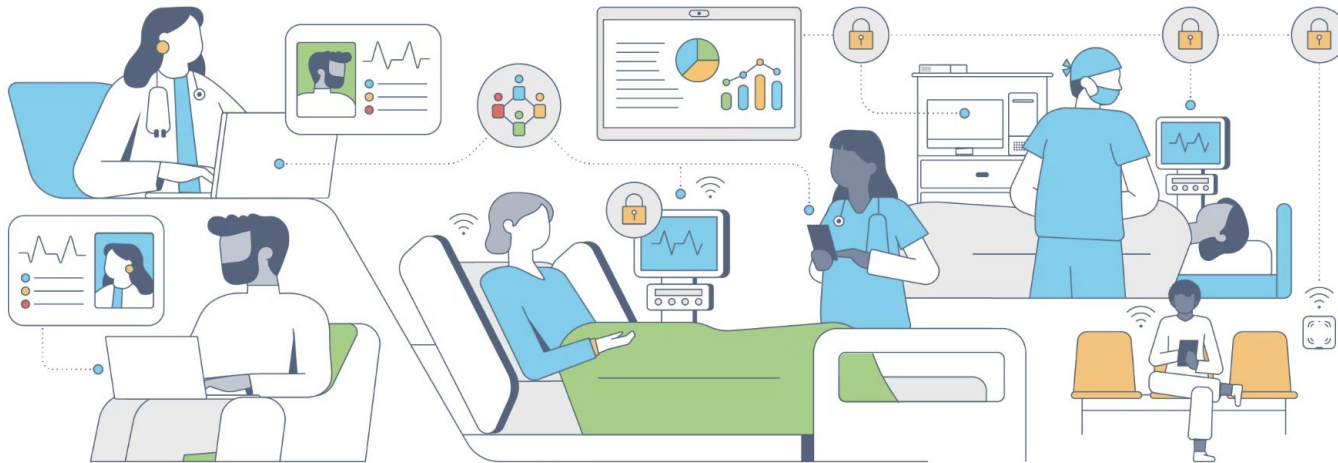
Endpoint security



DNS management



Malware protection



Workforce

Ensure only the **right users** and **secure devices** can access applications

Workplace

Secure all **user** and **device connections** across your **network**, including medical devices and IoT

Workloads

Secure all connections within your **apps**, across multi-cloud

How does Cisco zero trust work?

3 Step cyclical process



We establish trust by verifying:

- ✓ User & device identity
- ✓ Device posture & vulnerabilities
- ✓ Any workloads
- ✓ App/service trust
- ✓ Any indicators of compromise

We enforce least privilege access to:

- ✓ Applications
- ✓ Network resources
- ✓ Workload communications
- ✓ All workload users/admins
- ✓ Users, devices and things

We continuously verify:

- ✓ Original tenets used to establish trust are still true
- ✓ Traffic is not threat traffic
- ✓ Any risky, anomalous and malicious behavior
- ✓ If compromised, then the trust level is changed

Key business benefits



Reduce risk associated with both medical and IoT devices



Automate medical and IoT device tracking and inventory



Lower risk of medical record theft and fines for breaches



Higher average network uptimes and reduced cost of unplanned downtime procedures



Monitor device utilization to optimize workflows, meet utilization demands and drive lifecycle management schedules.



Improve patient safety

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The bridge to possible

Thank you

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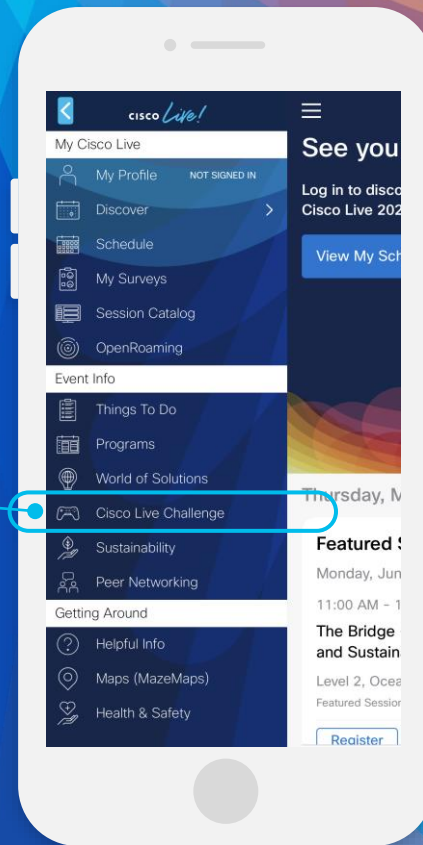
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Session Title: Healthcare's digital tsunami – why the future of smart hospitals depends on IT

- Abstract (1000 character limit): A future is almost here where every light, every screen, every device in every patient room is connected to a network switch for power, connectivity and security. And for many healthcare institutions, those assets are a net new endpoint for IT to manage and a new threat surface to secure. Add in the biomedical devices that were on a shadow network, personal wearables and company-owned mobile and the image of the endpoint tsunami becomes clear. We are at the beginning of a convergence of Information, operational and medical device systems where everything meets at the network as more devices are driven by power-over-ethernet (uPOE) to achieve sustainability goals. Learn more about how Cisco can help you manage the growing demand where IT manages almost every endpoint that uses electricity.