Using Infrastructure & Application Monitoring to Assure an Optimal User Experience

September 19, 2013

Presented by

Using Infrastructure & Application Monitoring to Assure an Optimal User Experience

September 19, 2013

CareTechSolutions™

Welcome

CareTechSolutions

Agenda

- Evolution of 24x7 IT staffing
- Risks of “Lights Out”
- Assessing your current and desired state
- Monitoring models
- Getting started…
- CareTech Solutions overview and monitoring services

John Kaiser
Senior Director
IT Monitoring Services
CareTech Solutions

Learning Objectives

CareTechSolutions

Learning Objective 1:
Explain the evolution/current state of 24/7 IT staffing models along with current monitoring practices and things driving the need for more comprehensive monitoring.

Learning Objective 2:
Examine the maturity of the IT organization and determine what types of monitoring are needed/attainable to support an optimal user experience.

Learning Objective 3:
Learn how to avoid common mistakes and establish a monitoring process for long term success.

Evolution of 24x7 IT Staffing

Evolution

CareTechSolutions

MEDIUM Risk	HIGH Risk	LOW Risk
Past	**Evolution**	**Future**
• Mainframe • Operational tasks • Managing backups and print jobs **Drivers to Evolve:** • Implementing automating tools • Reduction of printing	• "Lights out" • 24x7 help desk • Dependent on decentralized tools and automated alerting **Drivers to Evolve:** • Reactive support model	• Integrated toolkit • 24x7 "eyes on glass" • **GOAL: Increase EU performance** • Consolidated views • Insight to actual user experience • Consistent thresholds and alerting

24x7 IT Staffing **Evolution Timeline**

Current Business Drivers

CareTechSolutions

- More and more systems coming into play
- Perpetual change
- User expectations
- Complexity of infrastructure
- Pressure to reduce costs
- Increased impact of downtime
- Constituent changes

Poll Question 1: What are you currently monitoring?

Option 1

Basic Infrastructure

Infrastructure:
- Servers
- Network devices

Option 2

Basic + Advanced Infrastructure

Infrastructure:
- Servers:
  - Database
  - Cluster state
  - Log interrogation
- Network:
  - Bandwidth utilization

Option 3

Basic + Advanced Infrastructure

Basic Applications

Infrastructure:
- Servers:
  - Database
  - Cluster state
  - Log interrogation
- Network:
  - Bandwidth utilization

Applications:
- Performance
- Availability (synthetic transactions)

Option 4

Basic + Advanced Infrastructure

Basic Applications

Infrastructure:
- Servers:
  - Database
  - Cluster state
  - Log interrogation
- Network:
  - Bandwidth utilization

Applications:
- Performance
- Availability (synthetic transactions)
- Real user monitoring

Option 5

Basic + Advanced Infrastructure

Basic Applications

Centralized "Eyes-on-Glass" 24x7

Infrastructure:
- Servers:
  - Database
  - Cluster state
  - Log interrogation
- Network:
  - Bandwidth utilization

Applications:
- Performance
- Availability (synthetic transactions)
- Real user monitoring

Risks of “Lights Out”

Cost of Insufficient Monitoring

CareTechSolutions

1. Poor system performance and awareness
2. Low user satisfaction
3. Misallocation of IT resources
4. Unacceptable downtime windows
   - Unscheduled downtimes
   - Excessive downtime windows

Traits of a Progressive Monitoring Model

Essentials of New Monitoring Model

CareTechSolutions

- Centralized
- Proactive
- Consistent
- 24x7x365
- Comprehensive (infrastructure & applications)
- Supports end user experience
- Enables faster root cause analysis

Poll Question 2: Do you believe it's important to have your "eyes on glass" 24x7x365?

Yes

Yes, it **is** important to have "eyes-on-glass" 24x7x365.

No

No, it **is not** important to have "eyes-on-glass" 24x7x365.

Getting started…

Due Diligence…

- Self-assess your current environment
- Plan
  - ✓ Determine appropriate:
    - Tools
    - Skills
    - Processes
    - Manpower
  - ✓ Define appropriate governance
- Document findings (executive summary)
- Get started!

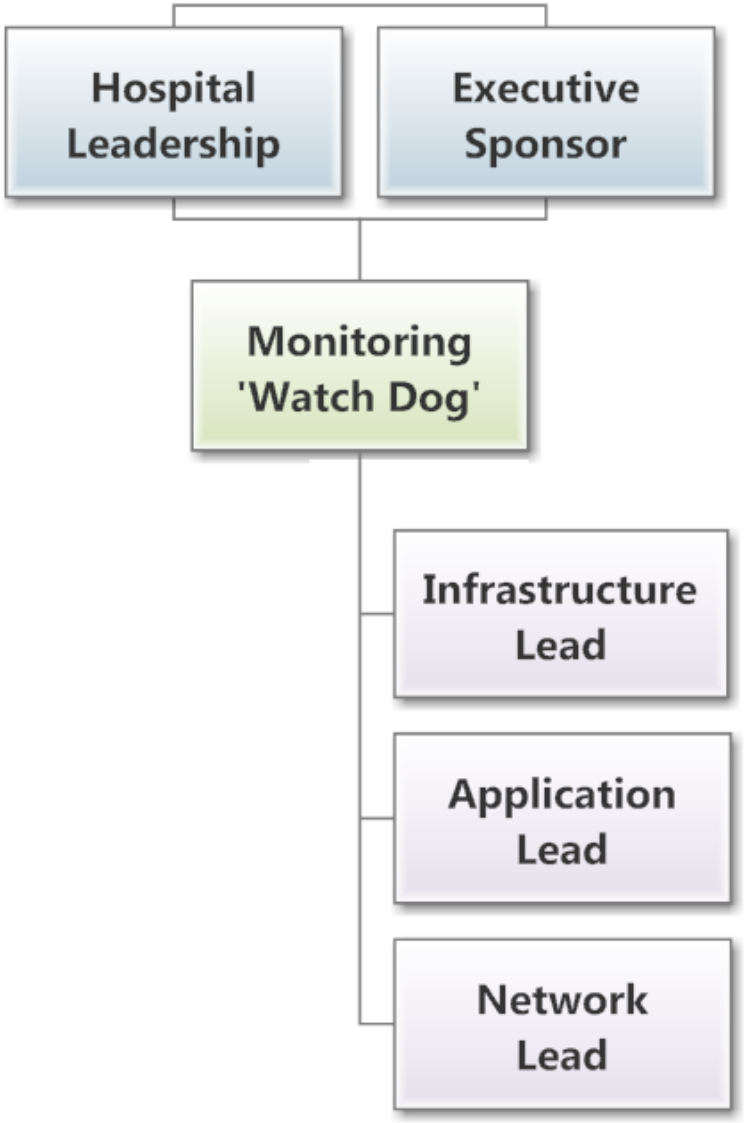
High Level Considerations
Based on HIMSS EHR Adoption Level

HIMSS Stage	Capabilities	Monitoring Levels	IT Dept. Competencies
STAGE 7	Complete EMR; CCD transactions to share data; data warehousing; data continuity with ED, ambulatory, OP	• ***Real user monitoring*** • ***Monitor, interrogate and align traffic between application tiers*** • ***Deep transaction processing*** • Synthetic monitoring • Scripted processes running on dedicated PC workstation Core Technology Processes: • Servers, server clusters • Databases Core Layer Infrastructure: • Servers	• ***Intimate knowledge of core applications*** • Mature application team and support model • Dedicated monitoring resource • Governance support • Budget • In-house infrastructure • Change control management
STAGE 6	Physician documentation (structured templates), full CDSS (variance & compliance), full R-PACS		
HIMSS Stage	**Capabilities**	**Monitoring Levels**	**IT Dept. Competencies**
STAGE 5	Closed loop medical administration	• ***Synthetic monitoring*** • ***Scripted processes running on dedicated PC workstation*** Core Technology Processes: • Servers, server clusters • Databases Core Layer Infrastructure: • Servers • Network Devices / Bandwidth	• ***Mature application team and support model*** • Dedicated monitoring resource • Governance support • Budget • In-house infrastructure • Change control management
STAGE 4	CPOE, Clinical decision support (clinical protocols)		
STAGE 3	Nursing/clinical documentation (flow sheets), CDSS (error		
HIMSS Stage	**Capabilities**	**Monitoring Levels**	**IT Dept. Competencies**
STAGE 2	CDR, Controlled medical vocabulary, CDS, may have document imagining; HIE capable	***Core Technology Processes:*** • ***Servers, server clusters*** • ***Databases*** ***Core Layer Infrastructure:*** • ***Servers*** • ***Network Devices / Bandwidth*** • ***Base KPIs***	• ***Dedicated monitoring resource*** • ***Governance support*** • ***Budget*** • ***In-house infrastructure*** • ***Change control management***
STAGE 1	Ancillaries Lab, rad, pharmacy installed		

Source: HIMSS Analytics. *United States EMR Adoption Model .*

Governance Model: Why it's Fundamental?

CareTechSolutions



Summary / Wrap-up

CareTechSolutions

- Infrastructure + application + consistent incident management = comprehensive monitoring approach
- Access your current state readiness
- Build a strategy to prevent purchasing unnecessary tools
- Build your monitoring as your IT environment evolves
- Get executive buy in with governance model

CareTech Solutions Overview and Monitoring Services

Fast Facts

- Healthcare IT company
  - Founded in 1998
  - Located in Troy, Michigan
  - Privately held
  - 200+ U.S. hospitals in 33 states
- 1,200+ employees
- Best in KLAS

Services and Solutions

CareTechSolutions

Data Center Services

Monitoring

Managed Services

Service Desk

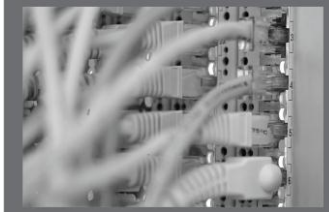
Recovery Services

Web Products and Services

Board Portal

Document Management

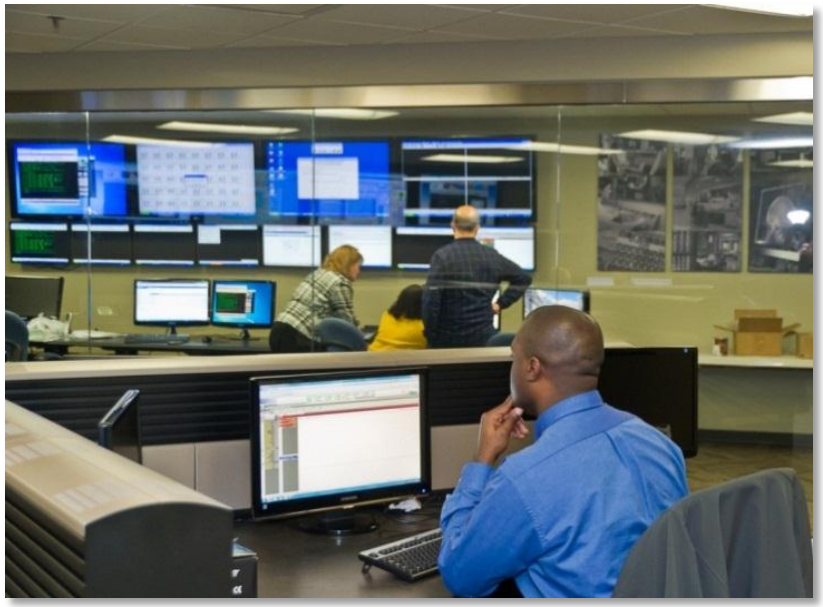
Cabling



CareTechSolutions

Pulse Overview

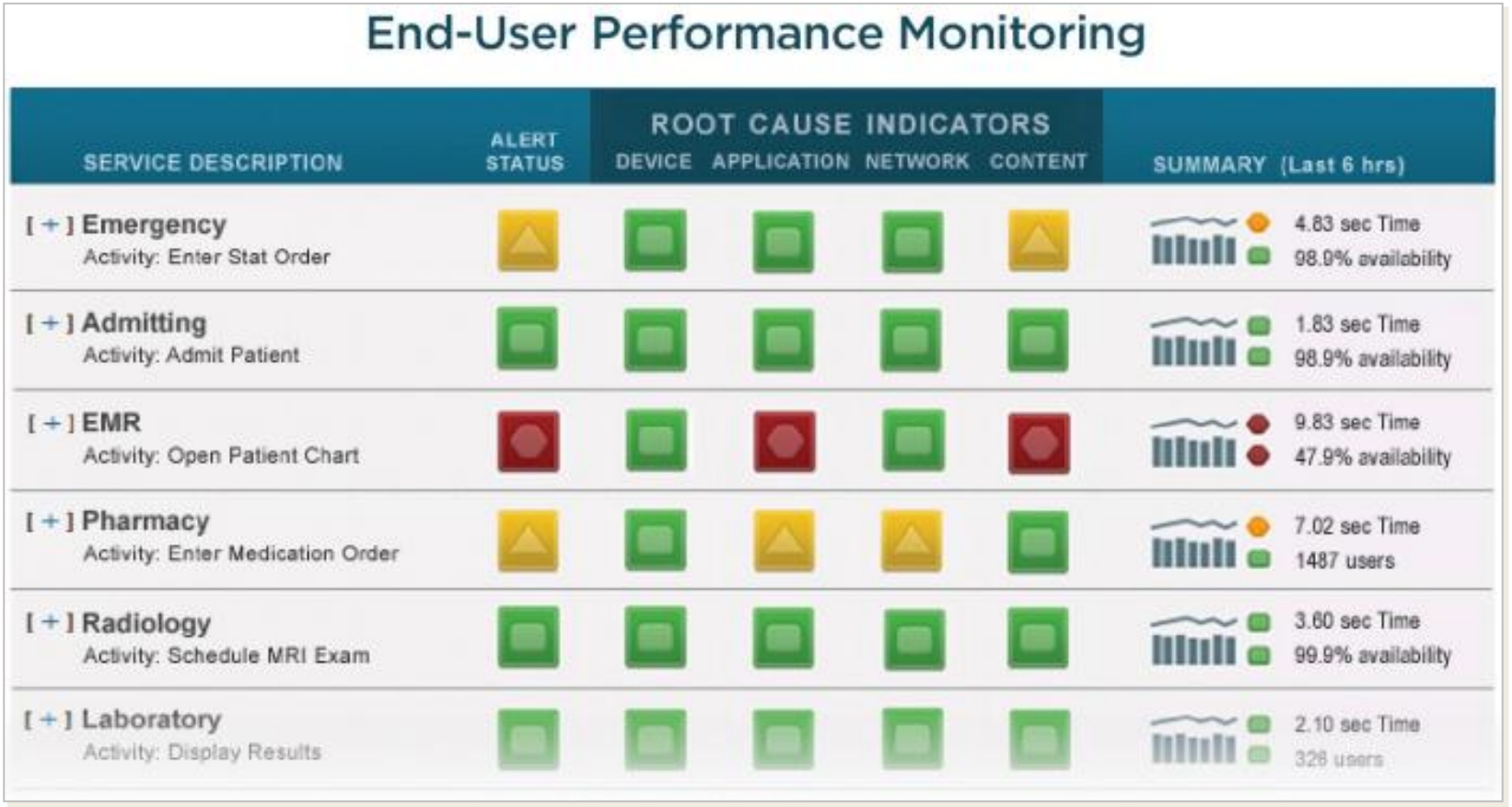
- 7x24x365 proactive monitoring
- Best-in-breed monitoring tools
- Trained monitoring staff
- Break / fix experts
- Automated triggering of alerts and escalation processes



Pulse Overview

CareTechSolutions

- Executive dashboards, reporting
- Service Level Agreement (SLA) metrics
- Processes based on ITIL framework
- Dedicated monitoring facility
- Active fail-over facility



Key Differentiators

CareTechSolutions

HIS Knowledge

- Monitoring healthcare applications and infrastructure for over 10 years

Integrated Solution

- Knowledge and experience with every core clinical application (infrastructure and applications)

Comprehensive

- Clinical and business applications, and infrastructure

Leveraged Expertise

- Utilize a shared technology model following best practices
- Teams have access to expertise in all core competencies; from applications to networks

CareTechSolutions

John Kaiser
Phone: (248) 823-0336
Email: john.kaiser@caretech.com
www.caretech.com