

Network Management Webinar

Hosted by:

TrueFit Solutions, Inc.

800 Cranberry Woods Drive

Cranberry, PA 16066

(724) 772-5959

www.truefitsolutions.com

Who are we?

- Founded in 1997
- IT consulting and technology firm
- Consult, design, deploy, and support networks
- Provide custom development and web solutions
- Provide @Task Project Management Solutions

Who am I?

- Network Services Manager
- Chief Network Architect
- With TrueFit since 1998

Goals

- Demonstrate the importance of proactive network management in several key areas, and its impact on the bottom line
- Arm attendees with practical information regarding network management
- Challenge you to think proactively and help you get there.

Session Overview

- Business Impact of Reactive Network Management
- Best Practices: Network Management
- Utilizing Proactive Network Monitoring to optimize productivity and resources

Network Management

The typical questions:

- Why do we care?
- Why should we do anything other than what we are doing now?
- Why is network management important to my business?

The typical challenge:

- Show me business impact.

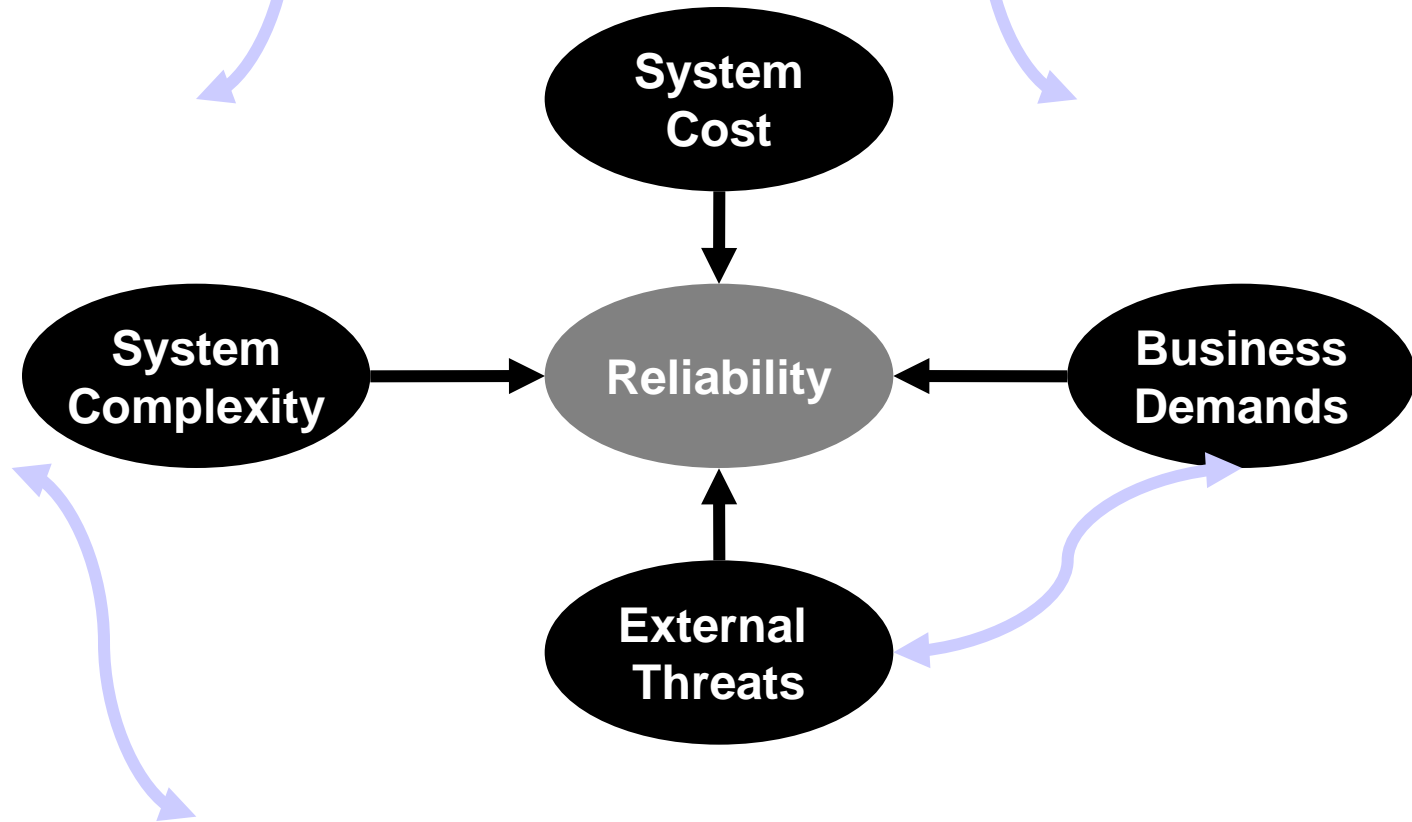
What is the Goal?

To keep the network running smoothly, applications and data available to internal users and customers, and unauthorized people and programs out.

In short: To keep the business running.

So why do we pay so little attention to it?

Challenges facing IT



Problems

- Ongoing costs and predictability
 - Costs too much to maintain IT systems now
 - Poor predictability for costs
- Excess downtime
 - Lost productivity
 - Costs to fix
 - Management time and effort to resolve
- Accountability
 - Who owns the problem?

The Perception

- Networks seem to go down at the most inopportune time:
 - Month end
 - Deliverable due date
 - Important email
 - Lost productivity
- The fact is that network downtime, no matter when, impedes your ability to do business.

Does this sound familiar?

- Failures occur without notice
- Hard to plan your day when fighting fires
- Chaotic environment, everything is priority #1
- Frustrated users
- Need to justify all IT expenditures
- Time spent on tasks that should be automated leaving no time to improve systems
- Management dissatisfied with IT results

Being asked to do more with less.....

Reality Check

- Downtime effects your productivity
 - One hour of downtime for a \$4 million revenue company costs \$2,000
 - The average company in the U.S. experiences 2 hours of downtime per week

$$\mathbf{\$2,000/hour \times 2 \text{ hours} \times 4 \text{ weeks} =}$$
$$\mathbf{\$16,000/month}$$

- IT is the #1 variable expense after HR
- Downtime has become the #1 expense in IT

Specific Objectives

- Reduce preventable IT failures and their duration
- Predict and justify IT costs
- Improve employees productivity and reduce user frustration
- Reduce emergency service/support calls
- Reduce downtime

Sounds great: How?

- How does my organization make this happen?

Proactive Network Management

- Most failures are preventable
- The signs are there, if you are looking
- End-user education along with proper environmental standards, design, and maintenance will create a POSITIVE perception of IT within your organization and keep people productive
- It starts with a network design based on business requirements

Network Design

- The fact is, if a network is not designed to fit business needs, it will never create the productivity levels needed for success
- It's never a bad time to re-examine your network design and strategy if you are not 100% confident that it aligns with your organization's needs
- If the network doesn't fit the business, network management is moot

Design Considerations

- Hours of operation (office, plant, branch offices in other time zones, etc.)
- Access requirements / mobility
- Mission-critical applications
- Security requirements (must balance with access requirements)
- Connectivity / bandwidth requirements
- Client requirements (PC, thin client, etc.)
- Data Backup requirements

Preventative Maintenance

- Server vital statistics
- Server / application performance
- Antivirus system functionality and updates
- Backup system functionality
- Traffic / bandwidth analysis
- Patch Management

Preventative Maintenance

- Most of the time, it's the simple, little things that cause big problems
 - Disk space running low, applications crash and valuable time and data is lost
 - Security patches out of date, now you have a worm
 - Hard disk has been generating errors for a month, now it just failed

Preventative Maintenance

- Documentation trail is important
 - When did we install what patches?
 - Trending – why is our disk space utilization increasing 10% each month on SERVER1?
 - Why does SERVER2 have the same problem every week?
- Provides you with information you can use to make informed decisions
 - When to upgrade hardware
 - When to enact new standards or policies
 - Creates a solution-oriented environment, as opposed to reactive (duct-tape and chewing gum)

Preventative Maintenance

- Automation
 - Microsoft Software Update Services (SUS, WSUS)
 - Microsoft Systems Management Server
 - Managed Services platform (outsourced / internal)
- Automate tasks and create digital log of everything that happens on your network

Monitoring and Alerting

- Real-time server, application, and network device monitoring to identify problems immediately or BEFORE they occur
- Monitor operating system, hardware, applications, network links, etc. and generate alerts when attention is required
- Alerting capability built into numerous applications (SMTP, SNMP, Windows Messaging, etc.)
- Managed Services platform – monitor it all and generate alerts / view activity from one central console

Standards and Documentation

- Standardize (based on business needs)
 - Workstation hardware
 - Workstation setup and configuration
 - Server and operating system platform
 - Application set
- Document it!
- If users feel there are standards and documentation to support it, based on business needs, perception is more likely to be positive.

Standards and Documentation

- Don't let the inmates run the asylum.
 - If the network is designed and managed properly, the IT staff can work on technology solutions that are driven by business needs.
 - Users will not assume that they need to develop their own solutions for their needs.
 - You will have the time and focus to stay ahead of the users' needs, instead of reacting to problems and fighting fires.

Technical Support

- Put first things first! (Thank you Mr. Covey)
- The first step is to reduce the need for support by being proactive about network design, management, and security.
- The next step is to put a mechanism in place to handle support in a cost-effective manner.

Technical Support

- Turn the problem upside-down:
 - The question is not: How do we handle the increasing support needs of our organization?
 - The question is: How do we reduce the support needs of our organization?

The Mantra

- The network is the foundation of our business, upon which all application functionality is built.

There's no time!

- There is always time to step back and examine network design, management, and security practices – if you focus on making time. A proactive approach will reap huge benefits down the road.
- Make it a corporate focus, because it impacts your financial reports every year.

Security: Why do I care?

- Security is a component of network management
- High impact on employee productivity (and hence the bottom line)
- Your data is highly valuable to your organization
- ‘Black Hat’ community is growing, and the tools they use are getting better and easier to use
- Introduce employee accountability into your network computing environment
- Impact on your customers

The 'Black Hats'

- The bad guys
- Well-developed toolsets
 - Virus kits
 - Knowledge of vulnerabilities in popular software
 - Use the Internet to collaborate
 - Don't need to be as technically proficient as the previous generations

Employee Productivity Factors

- Network or system outages (network is down, e-mail is down, PC is down)
- Performance impacted on infected computers (servers or workstations)
- ‘Security-conscious’ users invest time in safeguarding their own computers

Data Factors

- Your information is your money
- Cost of lost data: e-mail, databases, web sites, documents

Impact on your Customers

- Spread a virus or worm to your customers does not make you look good, and may cost you the business
- Services on your network may not be available to your customers

Security Threats

- Viruses/worms (including Trojan horses)
- Spyware/Adware/Malware
- Unsolicited e-mail (spam)
- Hackers
- Internal network users (employees)

Security Threats

- Understanding the threats is crucial to solving the problems.
- Hackers and employees may have a motive for their actions (revenge, 'fun', money).
- Employees may do damage accidentally if proper security measures are not taken.
- Viruses, worms, spyware: do not need a motive and act autonomously.

Patch Management

- All network servers should be under a patch management scenario
- Can be automated (Managed Services / Microsoft SUS) or manual
- Security-related patches and service packs should be kept up-to-date

Patch Management

- Many successful attacks occur because patches are not current
 - Blaster worm

TrueFit Proactive Network Monitoring

- How does TrueFit's Proactive Network Monitoring provide a solution to the problems?
 - Near-real-time view of server performance, firewall functionality, critical network services, database engines, backup and virus protection functionality, and network connectivity
 - Alerted to symptoms before they become problems

TrueFit Proactive Network Monitoring

- How does TrueFit's Proactive Network Monitoring provide a solution to the problems?
 - Immediate identification of root problem – eliminate costly troubleshooting when network services are unavailable

TrueFit Proactive Network Monitoring

- How does TrueFit's Proactive Network Monitoring provide a solution to the problems?
 - Historical view of past data for trending analysis and IT planning
 - How is my server utilization affected over time as we add users to the system or upgrade software?
 - What server hardware may need upgraded/replaced in the next year?

TrueFit Proactive Network Monitoring

- Patch management
 - Have critical server updates performed on a pre-scheduled basis

TrueFit Proactive Network Monitoring

- Solution Demo