Campus Networking Best Practices

This Presentation and related materials will be available at:

http://nsrc.org/tutorials/2008/sanog12/
Getting Started

What are some of the first questions to answer?

- Are you going to offer support?
- What if you don’t?
- Is that an option?
- What do you want to or need to support?
Scalability

- Do your tools scale? If not, design them so they will.
- Be flexible
- Do What’s easier but, don't do...
- Quick “fixes” = Big overhead later
Starting from Scratch

- Plan
- Design and optimize traffic flow
- Use available tools
  - Ticketing systems
  - Wikis/Document management
- The Web - Use it!
- Some typical scenarios
- Be ready for spikes – graceful failure mode.
Resources

- You’ll probably need more than you can get.
- Where will you get these resources?
- What are resources?
  - Money, space, staffing, talent, administrative support, phones, networks, hardware, software, classes, etc.
- Become efficient and prioritize.
Protecting Your Group

- Set hours
- Backup your consultants
- Write down your policies
- Second line of defense
- Acceptable Use Policies (AUPs)
- Issues you can’t resolve... How do you deal with failure?
Creating Your Help Desk

- **Remove roadblocks!!**
- Getting talent - What’s the draw?
- The logistics
- Customized installs
- Make software available
- Document
Creating Your Help Desk Cont.

- Use the Web
- Use Email and tickets
  - trac: http://trac.edgewall.org/
  - rt: http://bestpractical.com/rt/
  - Auto-response? (email, tickets)
  - Searchable index (Mhonarc) vs. Mailman
Creating Your Help Desk Cont.

- Phone Systems
  - Hold queue - yes!
  - Can users leave voice mail?
    - Depends on your support
    - Very high overhead
  - Phone trees - Good and bad (escape?)
  - Phone traffic flow (Reception, hardware, network group, consulting, etc.)
Creating Your Help Desk Cont.

- Using other tools
  - Live chat
  - Wikis
  - Blogs
- Scheduling and scheduling software.
  - Scheduling is “n” complex to do
Proactive Steps

- Train your clients
- Offer free or fee-based training
- Push your documentation on your users.
- Push your Website
- Train your staff and train them some more
- Assign staff projects
- Stay up-to-date with what you support
Ticketing Systems

From yesterday:

**rt**
- Heavily used worldwide.
- Can be customized to your location.
- Somewhat difficult to install and configure.
- Handles large-scale operations.

**trac**
- A hybrid system that includes a wiki and project management features.
- Ticketing system not as robust as rt, but works well.
- Often used for "trac"king group projects.
Why are they important?
- Track all events, failures and issues
- Focal point for help desk communication
- Use it to track all communications
  - Both internal and external
- Events originating from the outside:
  - customer complaints
- Events originating from the inside:
  - System outages (direct or indirect)
  - Planned maintenance / upgrade: Remember to notify your customers!
Ticketing Systems – 3

- Use ticket system to follow each case, including internal communication between technicians
- Each case is assigned a case number
- Each case goes through a similar life cycle:
  - New
  - Open
  - ...
  - Resolved
  - Closed
**Help Request Flow**

A sample top-level view of flow of a help request

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- fix issue -> eqpt

- comm

- report fix
Sample trac Projects

An open project:

http://ws.edu.isoc.org/trac/afnog08/

Closed projects:

http://nsrc.org/trac/afnog09/
http://nsrc.org/trac/pacnog/

Fully available live demo:

http://www.hosted-projects.com/trac/TracDemo/Demo

Installation Cookbook (Ubuntu):

http://nsrc.org/tutorials/2008/sanog12/day2/trac/
Sample rt system

Live demo:  
http://rt3.fsck.com/

Sample screenshots:  
http://blog.bestpractical.com/2008/07/today-were-rele.html
Summary

- Quick fixes hurt
- You may be short on resources
- Set expectations
- Remove roadblocks
  - Calculate expense with, without and to remove.
- Lots of staff training.
- Use software to your advantage (rt/trac)
- Is the customer always right?
Questions?