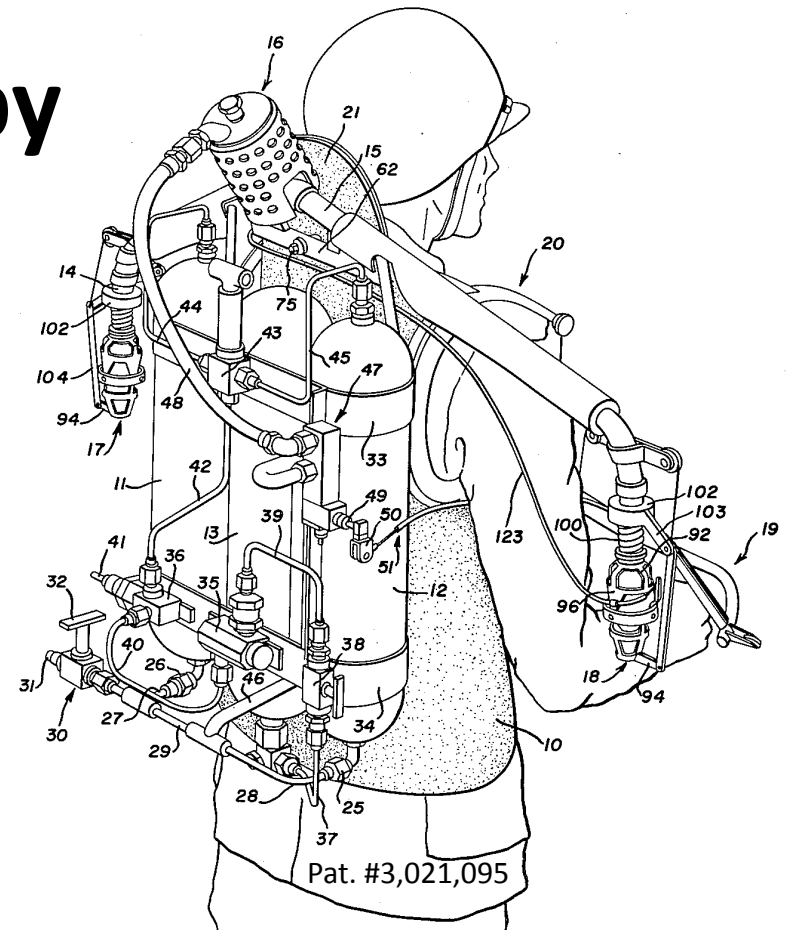# I Got My Jet Pack…
and I'm Still Not Happy

David N. Blank-Edelman
Director of Technology
Northeastern University
College of Computer and Information Science
BBLISA January 2010

Pat. #3,021,095

Tools to Make You More Efficient

2nd Edition
Revised & Expanded

Automating

System Administration with Perl

David N. Blank-Edelman

It is important to pick the right metaphor

...for your talk

The New York Times

Science

The Jetpack: From Comics to a Liftoff in the Yard

Andy Manis for The New York Times

John Schwartz of The New York Times tested a jetpack with its inventor, Glenn Martin, left, and Ray Thomsen guiding him. The device was unveiled Tuesday at an air show in Wisconsin.

By JOHN SCHWARTZ
Published: July 29, 2008

COMMENTS (81)

SIGN IN TO E-MAIL
OR SAVE THIS

OSHKOSH, Wis. — To rise off the ground wearing a jetpack is to feel the force of dreams. Very, very noisy dreams.

Popular Mechanics

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Last Updated 11/4/08 11:57 AM

AUTOMOTIVE HOME JOURNAL SCIENCE TECHNOLOGY   PM NEWS HOW-TO CENTRAL

Upgrade Military & Law Enforcement **Transportation** Industry Energy Family & Digi
Technology

Jetpack Competitors Start Dogfight With Flashy New Startup

The Martin Jetpack, like the three big rocket belts before it, took off this month in a surge of buzz and headlines. Now other pioneering rocketeers are speaking out for the first time, going so far as to call the new device a "widow maker." Could the new battle finally spell takeoff for this futuristic industry—or just more prolonged promise?

By Erik Sofge

Published on: August 18, 2008

TAM

JET P.I.
JET PACK INTERNATIONAL

THUNDERBOLT AEROSYSTEMS

Past work on Interactions

Past work on interactions

LEARNING TO TEACH DIAGNOSIS

If I Could Talk To The Animals

David N. Blank-Edelman

Northeastern University CCS

LISA 2001 Invited Talk

Should We Ask a Mechanic?

No.

- They can pull parts and put them back in again.

- Their world does not fluctuate as much.

- They have much better instrumentation than we do.

Should We Ask a Doctor?

Getting warmer, but no.

- Works on the same species.

- Largely has the luxury of communicating directly with the patient for diagnostic information.

Should We Ask a Veterinarian?

Yes.

- In common:
  - Large variety of different species
  - Can't easily replace parts and have patient live.
  - Diagnostic information comes from a third source.

How Are Vets Taught?

- 27 accredited schools in the US
- 4 in Canada
- Largely 4 year schools, last year is heavily clinical
- Extremely competitive, rigorous admission standards.
- They are *hard* work after you get in too.

My "Research"

- I reviewed all the available curricula listings from US schools (~70%)
- I followed up with question to representatives from ~⅓ of the schools
- Getting hold of veterinarians is hard, getting hold of veterinarians that teach is *very* hard.
- I asked at least these two questions:
  – Where/how do you explicitly teach diagnostic skills?
  – Where/how do you teach about acquisition of diagnostic information from an owner of an animal?

Example Answers

- Some standard answers:
  - Everywhere and nowhere (you fool)
  - Problem Based Learning
  - Clinical years (rounds, etc)

- Cornell university:
  - Entirely PBL in the 1st 2½ years
  - Clinics in the second year sometimes videotaped
  - Community practices service (see healthy animals)

- Iowa State:
  - PBL-hybrid class in 1st 4 semesters which includes fake patients with problems
  - Communications skills class taught by counselors, not vets

Past work on interactions

IMPROVING INTRA- AND INTER-SPECIES TECHNICAL COMMUNICATION

# SysAdmin, Stories and Signing: Learning from Communication Experts

David N. Blank-Edelman

Northeastern University CCIS

LISA2002

Stories are Good for...

- Describing sequential or related events
- Making diverse information coherent
- Being a credible conduit for information
- Passing on lessons or exhortations
  - Frozen stories
  - Stories with a specific lesson/moral
  - Stories with a lesson the listener must find
- Fulfilling a number of social roles:
  - Establishing membership in a community
  - Establishing an individual's identity
  - Establishing a community's identity (shared interpretations)
- Making experience reproducible and reusable (safely)
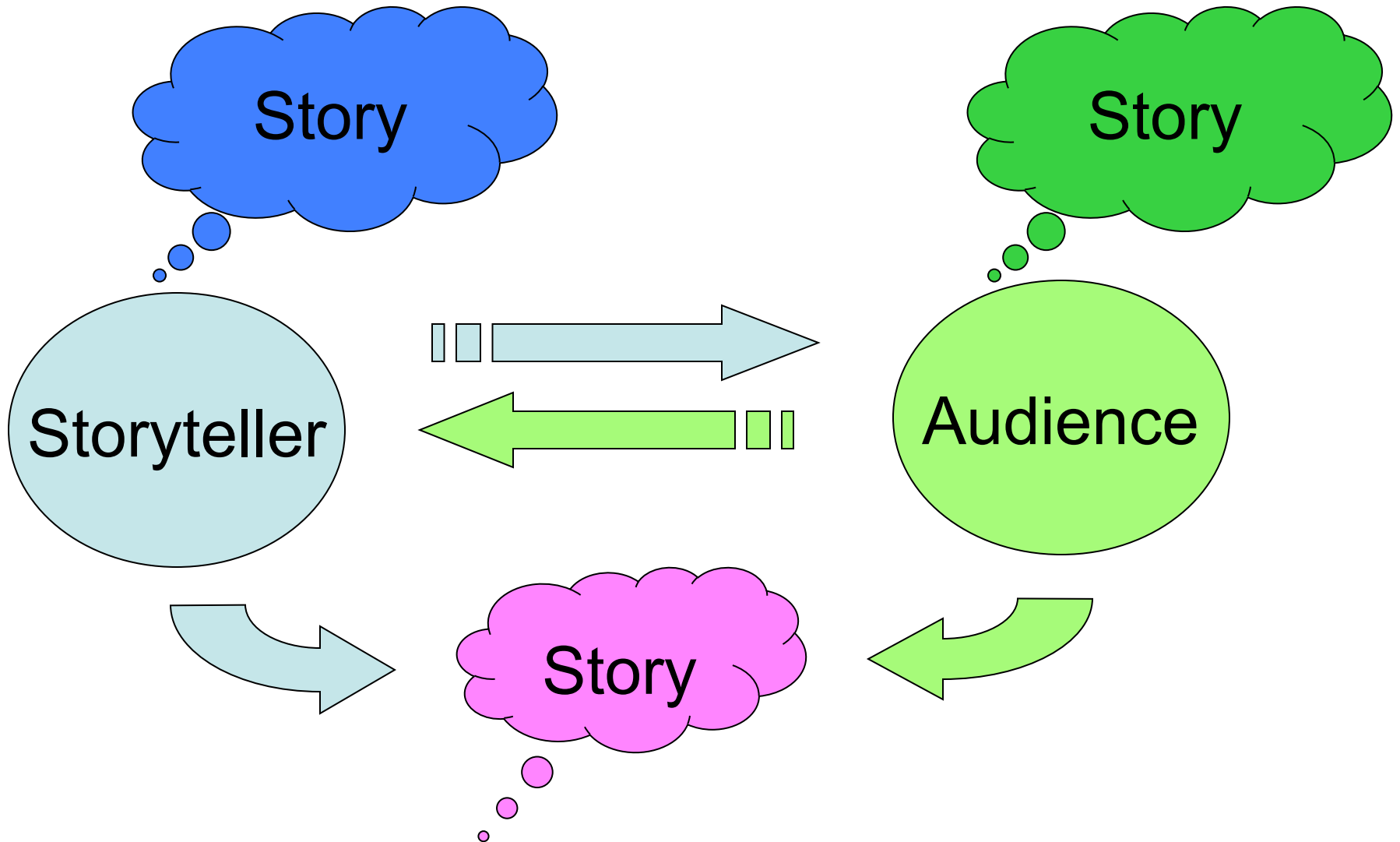
Nice PowerPoint-fu, but what does it mean?

- This is a real-time process
- You are not the story, but don't isolate it within yourself
- The storyteller creates the story *in the members of the audience*
- Storytelling is a negotiation
  - The storyteller creates and manages a set of expectations
  - You can violate them, but you must do it in a safe way
- The storyteller must honor the two-way contract that has been created

Interpretation Cosmology
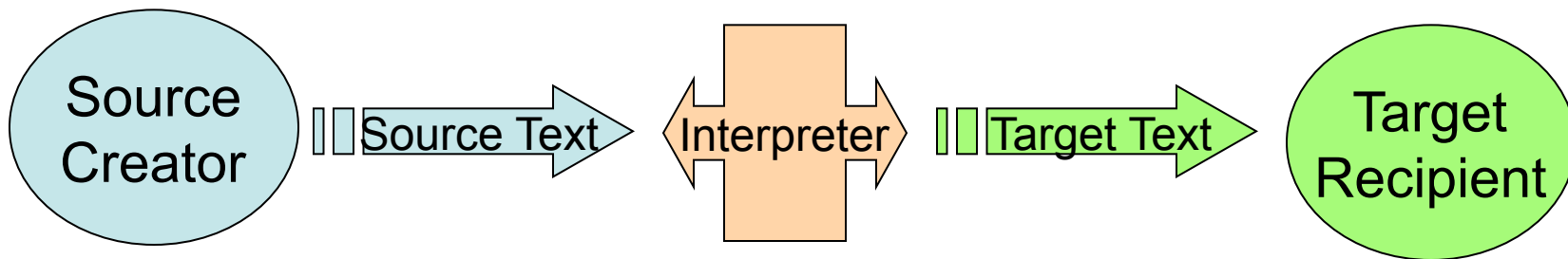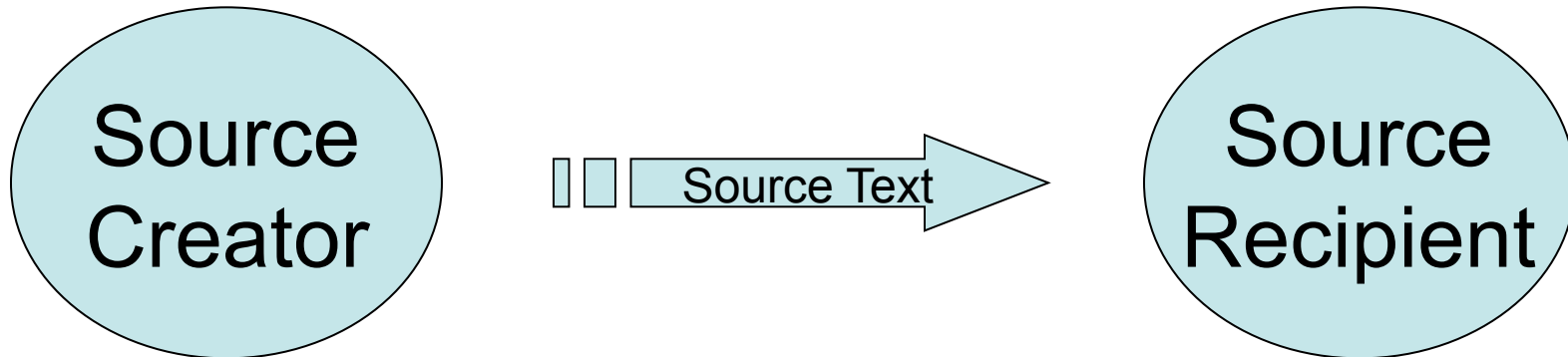
Past work on interactions

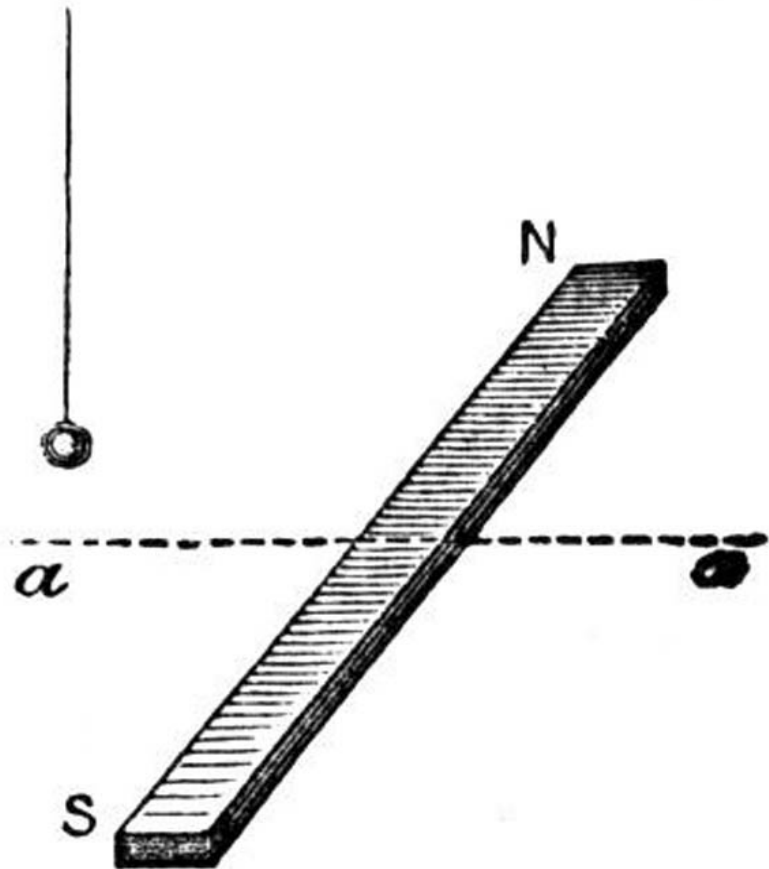# UNDERSTANDING THE EXTERNAL PERCEPTION OF SYSTEM ADMINISTRATORS

Through the Lens Geekly: How SysAdmins Are Portrayed in Pop Culture

David N. Blank-Edelman
Northeastern University CCIS
LISA 2003

The Three Stereotype Polarities

- Competence

- Morality

- Hipness

Past work on interactions

EXPLORING THE DEBUGGING PROCESS FOR COMPLEX SYSTEMS

System Administration and Sex Therapy:

The Gentle Art of Debugging

David N. Blank-Edelman
Northeastern University CCIS
LISA 2004

Why SysAdmin & Sex Therapy?

- Draws a crowd, no?
- Our debugging tasks are getting harder
- Debugging is not just binary
- Two fields share a few things in common:
  - complex systems without authorship or control
  - "Should just work"

Our Debugging Tasks are Getting Harder

- Tendency towards complex and distributed dependency

- Don't control all of the parts and we haven't written all of the software

- Source code availability increasing…but the level it helps is decreasing

Sex Should "Just Work"

1. All other couples have sexual intercourse several times a week.

2. Sex for all other couples includes orgasm on every occasion.

3. All other couples are able to obtain orgasm simultaneously.

4. If sex is not good then there must be something wrong with the relationship generally.

5. Partners should instinctively know what type of stimulation their partner needs.

6. If a partner does not respond sexually to his/her partner then he/she does not find the partner sexually attractive.

(Spence, 1991)

Past work in interactions

DOCUMENTING COMPLEX MULTIVARIATE PROCESSES SO NOVICES CAN REPEAT THEM
+
PERFECT AND CONTINUOUS FUNCTIONING IN HIGH-PRESSURE TEAM SITUATIONS

Cookin'
at the Keyboard

David N. Blank-Edelman
Northeastern University

with

Lee Damon
University of Washington

Why Cooking is Hard

"To make a fine sauce, you can't just follow the recipe exactly, it's never exactly the same, so you always have to adjust. But that takes experience," he says.

"Do you need to add a touch of port to it, add a few more beets to the Bordelaise, reduce it down a bit to achieve a deeper, richer color? There are different things you need to adjust each time to make a sauce consistent. *You don't achieve consistency just by doing it the same way every time.*"
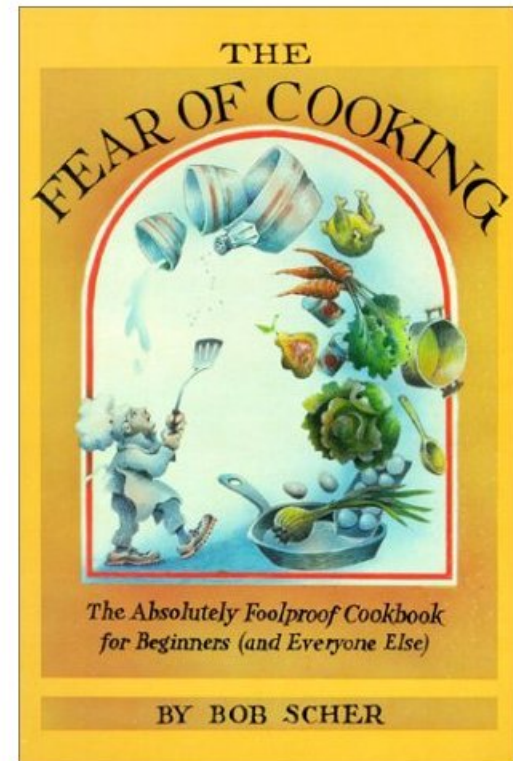
—Terrance Brennan in *Culinary Artistry* (emphasis mine)

Why Cooking is Hard
(Bob Scher)

- You aren't cooking.
  - At best, managing the conditions
- Number of variables are huge:
  - the weather, the season, the cook's disposition and mood, the quality and state of the ingredients, the equipment, altitude, etc.
- Cooking is very rarely a linear process.

THE FEAR OF COOKING

The Absolutely Foolproof Cookbook for Beginners (and Everyone Else)

BY BOB SCHER

Why Writing about Cooking is Harder
(Lorna Sass)

- You never make the same food twice.
- Really describing how to make a dish would scare readers.
- People no longer use common sense when cooking so you have to be more precise.
- Hard to write good instructions (requires repeated crossing of left/right brain divide).
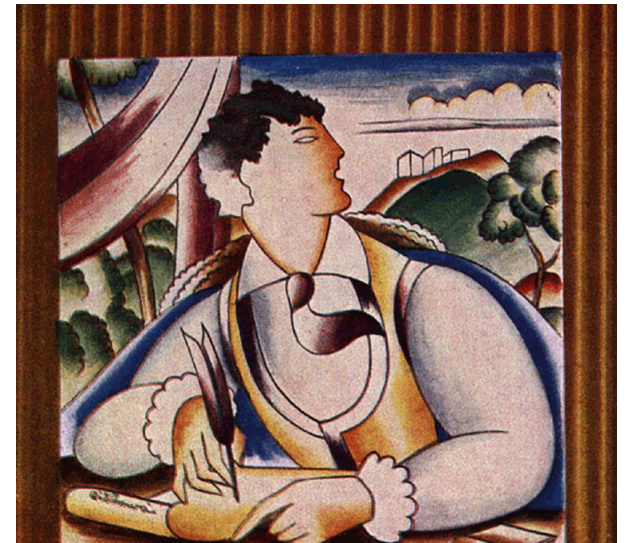
Testing Recipes (the ATK Way)

1. Research, yield 5-7 recipes
2. Kitchen test all recipes to determine variables, important attributes, goals
3. Start to test each variable, one at a time (several weeks, 40-50 tests)
4. Find final candidate, approved by Test Kitchen director
5. Sent out to professional recipe tester, writes up formal report
6. Sent to "friends of Cooks" (1000-2000 people, 50-200 responses), sent back to #3?

What Do You Need to Be A Line Cook in Their Kitchen?

- Chef McClelland adds:
  - Focus
  - Dedication to craft/willingness to succeed in environment
  - Accepting the contract: will be professional, will chase perfection on a daily basis
  - Willingness to realize not an individual, work in unison/rhythms
  - Willingness to jump in to help
  - Ability to receive new information and produce with it
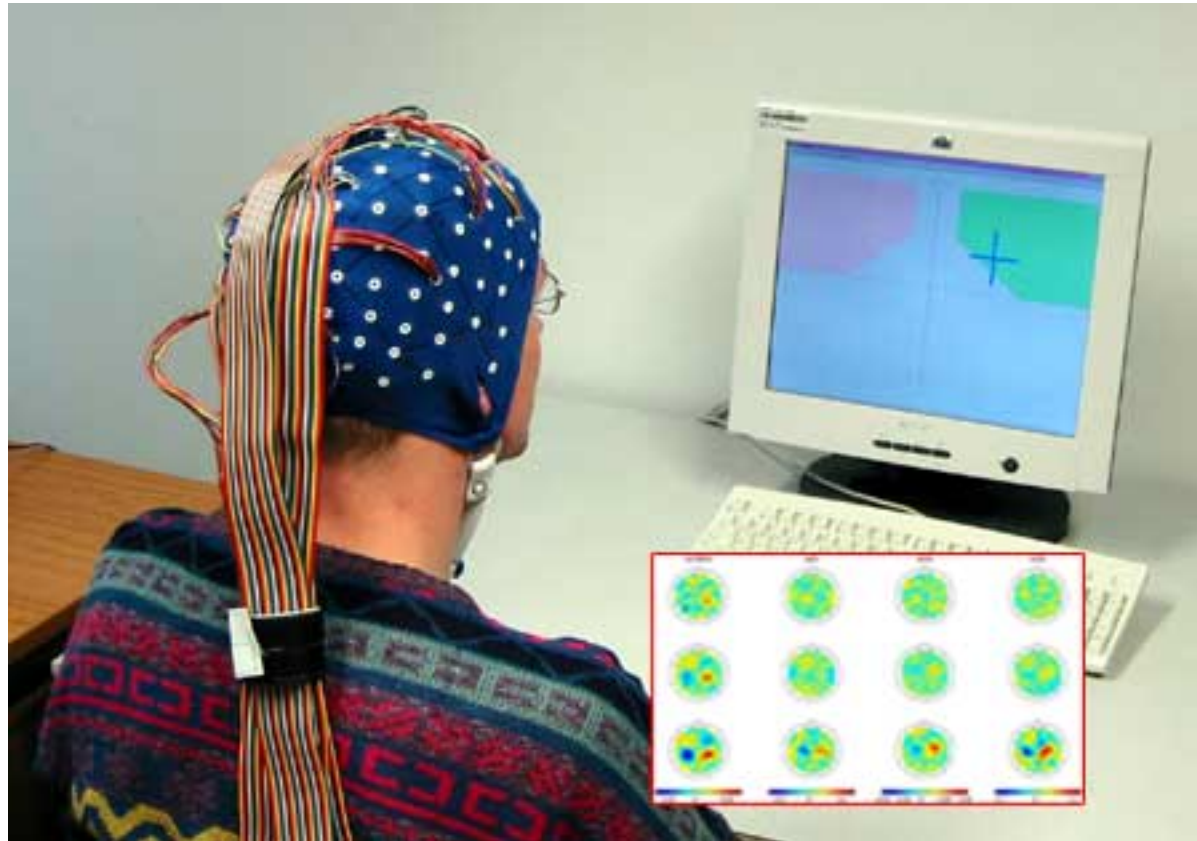
Mise En Place
"Everything in place"

- Physical
  - All food prepared and ready to cook
  - All sauces and garnishes
  - Cooking foods (oils, salts, etc)
  - Utensils/Equipment
  - Towels
- Arrangement
- Lynch: no cutting during service, only one slicing thing out if it is called for
- Team prepared at No.9 Park and L'Espalier, special highly trained chefs all day at L'Espalier

Working Clean

- McClelland: Clean as you go. Clean between tasks. Keeping yourself (apron, floor, cutting boards/knives) clean.

- Lynch: Start project, finish project (total focus).

- Why?
  - Clears your brain
  - Helps prepare for next task, clearing out the last
  - You are "working organized"
  - Ultimately saves time

- Bourdain recalls…

Interfaces

Microsoft® Help and Support

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| Help and Support Home | Select a Product | Advanced Search |

Computer Randomly Plays Classical Music

View products that this article applies to.

This article was previously published under Q261186

SUMMARY

During normal operation or in Safe mode, your computer may play "Fur Elise" or "It's a Small, Small World" seemingly at random. This is an indication sent to the PC speaker from the computer's BIOS that the CPU fan is failing or has failed, or that the power supply voltages have drifted out of tolerance. This is a design feature of a detection circuit and system BIOSes developed by Award/Unicore from 1997 on.

Article ID   : 261186
Last Review : March 27, 2007
Revision   : 3.3

MORE INFORMATION

Although these symptoms may appear to be virus-like, they are the result of an electronic hardware monitoring component of the motherboard and BIOS. You may want to have your computer checked or serviced.

For aditional related information, please see the following DFI Technologies Web site:

http://www.dfiusa.com/support/tech-support.html

Microsoft provides third-party contact information to help you find technical support. This contact information may change without notice. Microsoft does not guarantee the accuracy of this third-party contact information.

APPLIES TO

- Microsoft Windows 2000 Server
- Microsoft Windows 2000 Professional Edition
- Microsoft Windows 95
- Microsoft Windows 98 Standard Edition
- Microsoft Windows 98 Second Edition
- Microsoft Windows NT Server 4.0 Standard Edition

↑ Back to the top

Keywords: kbhardware kbinfo KB261186

Article Translatio
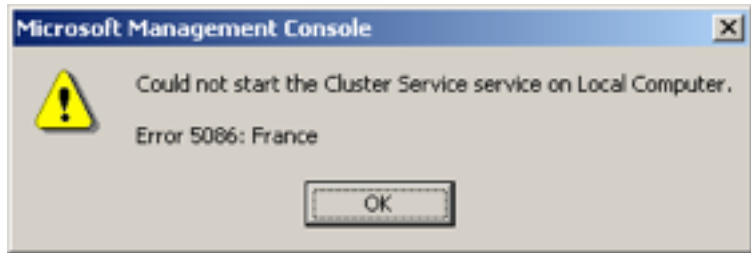
Arabic

Related Support

- Windows 2000
- Windows 98

Other Support O

- Need More He
  Contact a Sup
  professional b
  Online or Phon

- Customer Ser
  For non-techn
  assistance wit
  purchases,
  subscriptions,
  services, even
  training cours
  corporate sale
  issues, and m

- Newsgroups
  Pose a questio
  users. Discuss
  groups and Fo
  about specific
  products, tech
  and services.

Page Tools

- Print this page
- E-mail this pa

Microsoft Management Console

Could not start the Cluster Service service on Local Computer.

Error 5086: France

[OK]

chromium

An open-source browser project to help move the web forward.

Project Home   **Downloads**   **Wiki**   **Issues**

New issue | Search [Open issues ▼] for [   ] (Search) |

Advanced search | Search tips

☆ Issue 31482: Huge amount of goats teleported

‹ Prev 1059 of 9781 Next ›

51 people starred this issue and may be notified of changes.

Back to list

Status: Unconfirmed

Owner: ben@chromium.org

Cc: phajdan...@chromium.org,
mdm@chromium.org

Type-Bug

Pri-2

Area-Undefined

Mstone-5

Add a comment below

Reported by hidden.node, Jan 03, 2010

```
Chrome Version        : Google Chrome 4.0.266.0 (Official Build 33992)
URLs (if applicable) :
Other browsers tested:
Add OK or FAIL after other browsers where you have tested this issue:
     Safari 4: OK
  Firefox 3.x: OK
        IE 7: OK
        IE 8: OK


What steps will reproduce the problem?
1. Shift+Esc
2. Right click on any process
3. Select "Goats teleported"


What is the expected result?

I expected Google Chrome to teleport maybe three, maximum five goats!


What happens instead?

About 3*10^6 goats get teleported! I won't be able to pay for teleportation
of such huge amount of goats!
```

Task Manager - Google Chrome ⊠

Page	Memory	CPU	Network	Process ID	Goats Teleported
Browser	14,372K	0	N/A	3924	3,376,360
Tab: Teh Forum	18,848K	0	0	2880	3,406,663
Tab: Teh Forum			0		3,412,887
Plug-in: Shockwa...	10,620K	0	N/A	2144	3,423,895

Stats for nerds

End process

Why is SysAdmin Hard (meta)

- Translation between vague human needs and the tech world

- People-Machine boundary
  - Make people more like machines
  - Make machines more like people
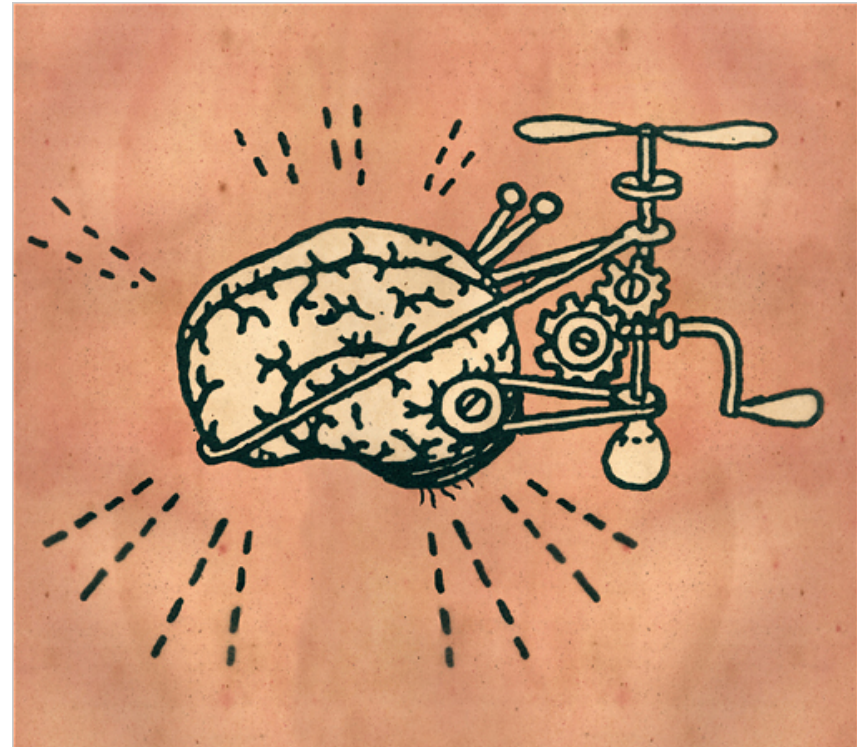
Prediction: The CAPTCHA spam arms race will lead to the creation of A.I.

Are you human? Please answer this question:

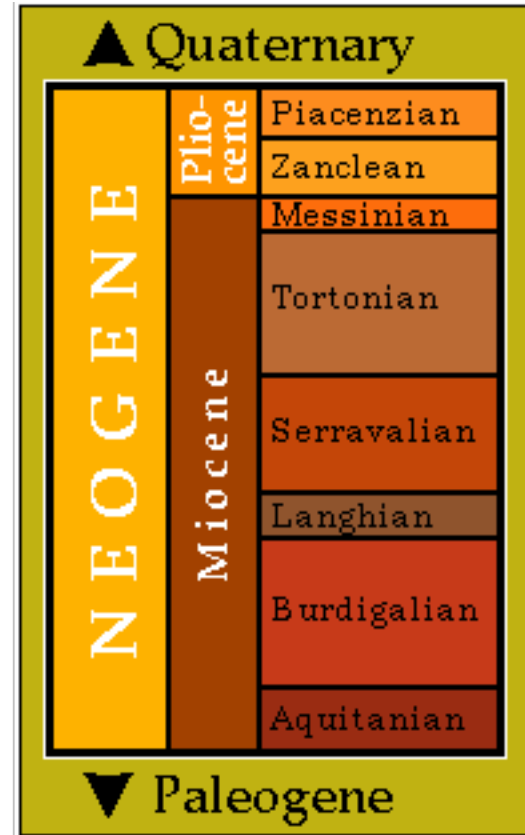DESCRIBE what *LOVE* feels like IN 200 words.

What Are We Up Against Now

- Human Weaknesses
  - Memory
  - Complexity
  - Systems understanding (mental modeling)
  - Communication
  - Slant

Epochs

- CLI
- GUI
- Automation
- Config mgmt

Command line

- Information sparse
- Leads to:
  - Terse and "efficient" communication
  - Mental vs. visual abstraction (regexp, globbing)
  - Leveragable/building block work
  - Specific learning curve with very few affordances
  - High accessibility
- Very small experiential difference between user and system administrator
- Most sysadmins dig this approach

```
tc qdisc del dev $ETH root 2>&1 > /dev/
  null
tc qdisc add dev $ETH root handle 1: htb
  default 2

tc class add dev $ETH parent 1: classid
  1:1 htb rate 1000mbit
tc class add dev $ETH parent 1: classid
  1:2 htb rate ${RESTRICTMEGABITS}mbit

tc filter add dev $ETH protocol ip parent
  1: prio 1 u32 match ip dst 129.10.0.0/16
  flowid 1:1
tc filter add dev $ETH protocol ip parent
  1: prio 1 u32 match ip dst 155.33.0.0/16
  flowid 1:1
```
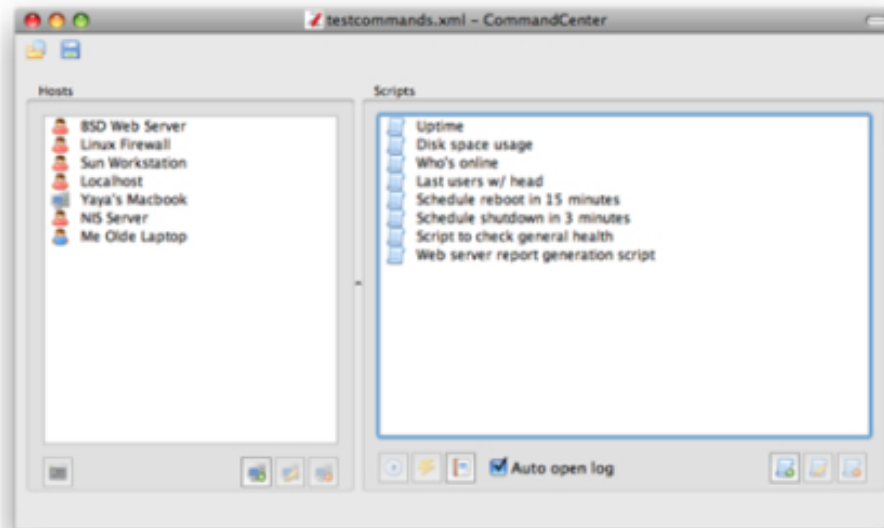
From: "MacZOT Team support-at-maczot.com IMacZotI" <jek5ji6yei0t@sneakemail.com>
Subject: CommandCenter - System Administration Made Easy!
Date: August 27, 2008 3:02:11 AM EDT
To: dnb@ccs.neu.edu
Reply-To: "support-at-maczot.com IMacZotI" <jek5ji6yei0t@sneakemail.com>

macZOT!

TODAY CONTACT FAQ MY ACCOUNT

Did you win today?

CommandCenter 1.0.9

Scripts Unlimited

testcommands.xml – CommandCenter

Hosts
- BSD Web Server
- Linux Firewall
- Sun Workstation
- Localhost
- Yaya's Macbook
- NIS Server
- Me Olde Laptop

Scripts
- Uptime
- Disk space usage
- Who's online
- Last users w/ head
- Schedule reboot in 15 minutes
- Schedule shutdown in 3 minutes
- Script to check general health
- Web server report generation script

☑ Auto open log

Try   Buy
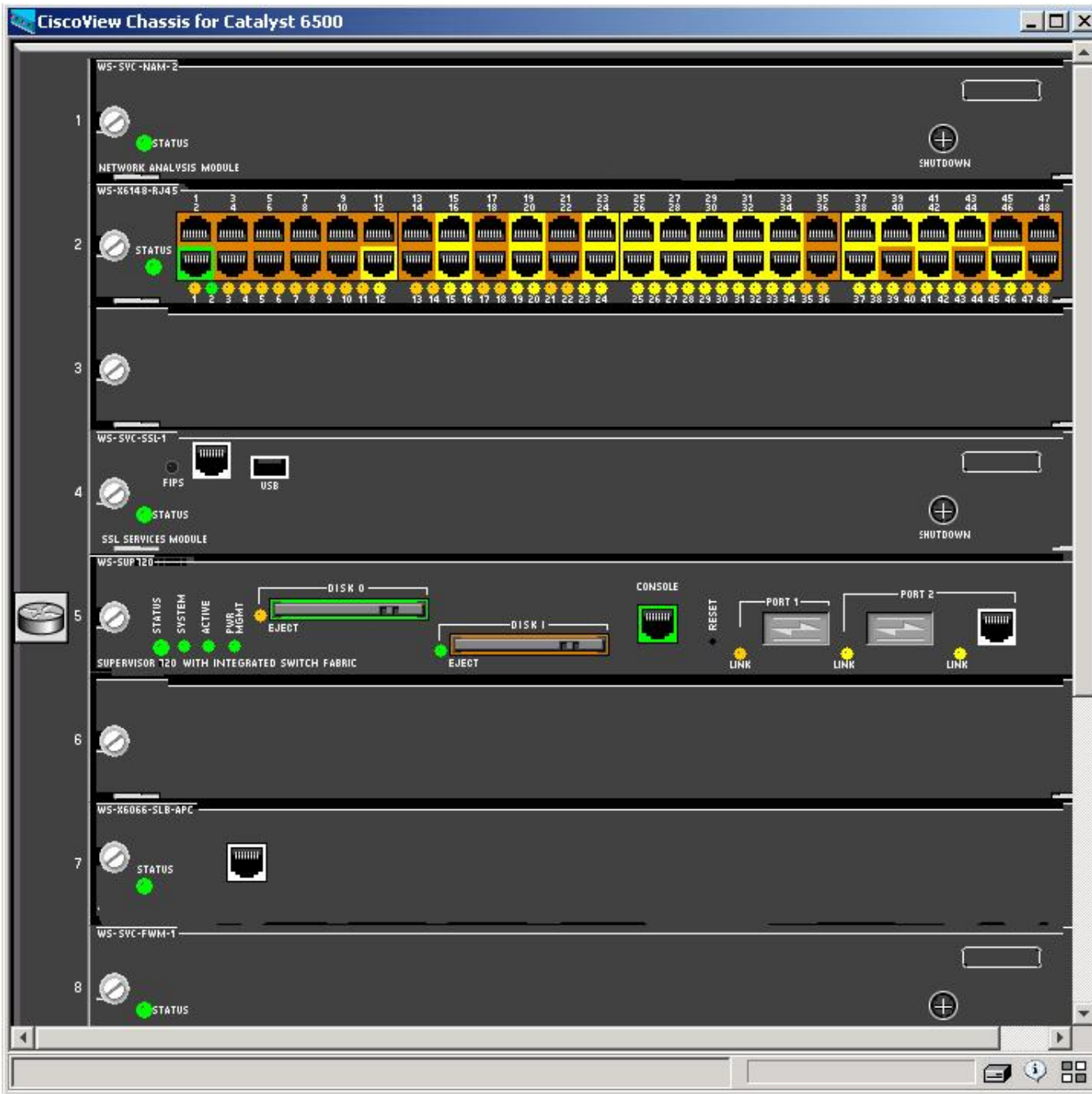
Retail Price: $ 29.95
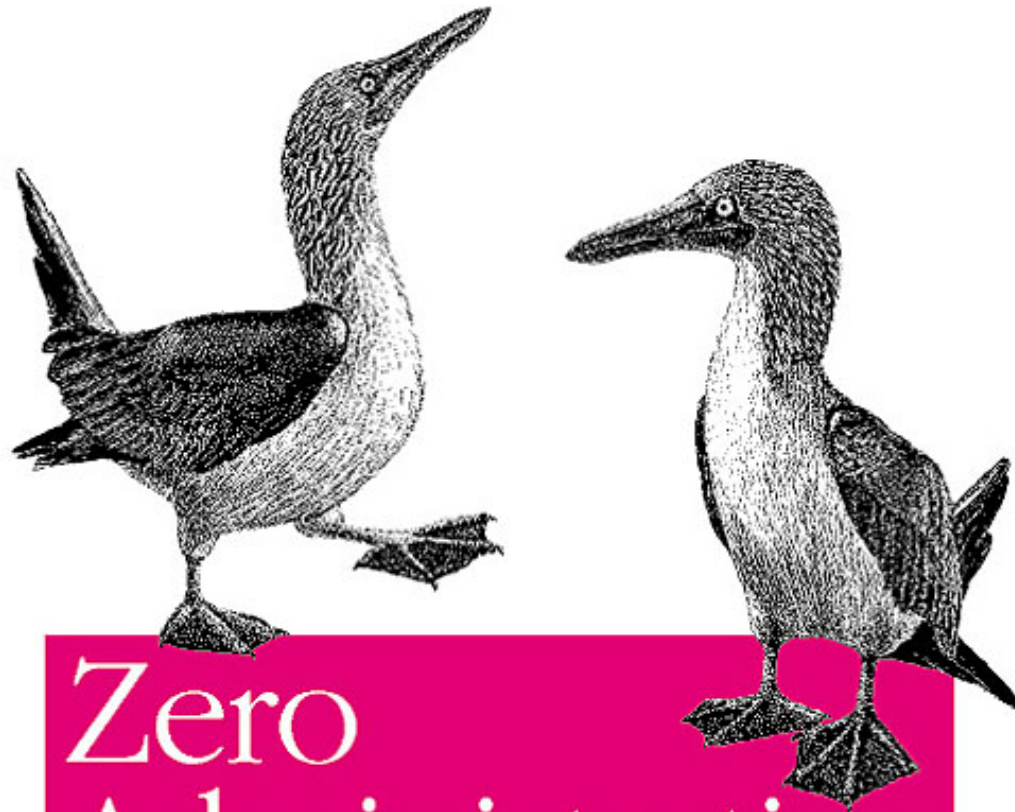
ZOT Price: $ 18.00

Save: 40% Now

GUI

- Move from one kind of abstraction to another
- Stick with examples from my history
- Not going to do an extensive historical survey
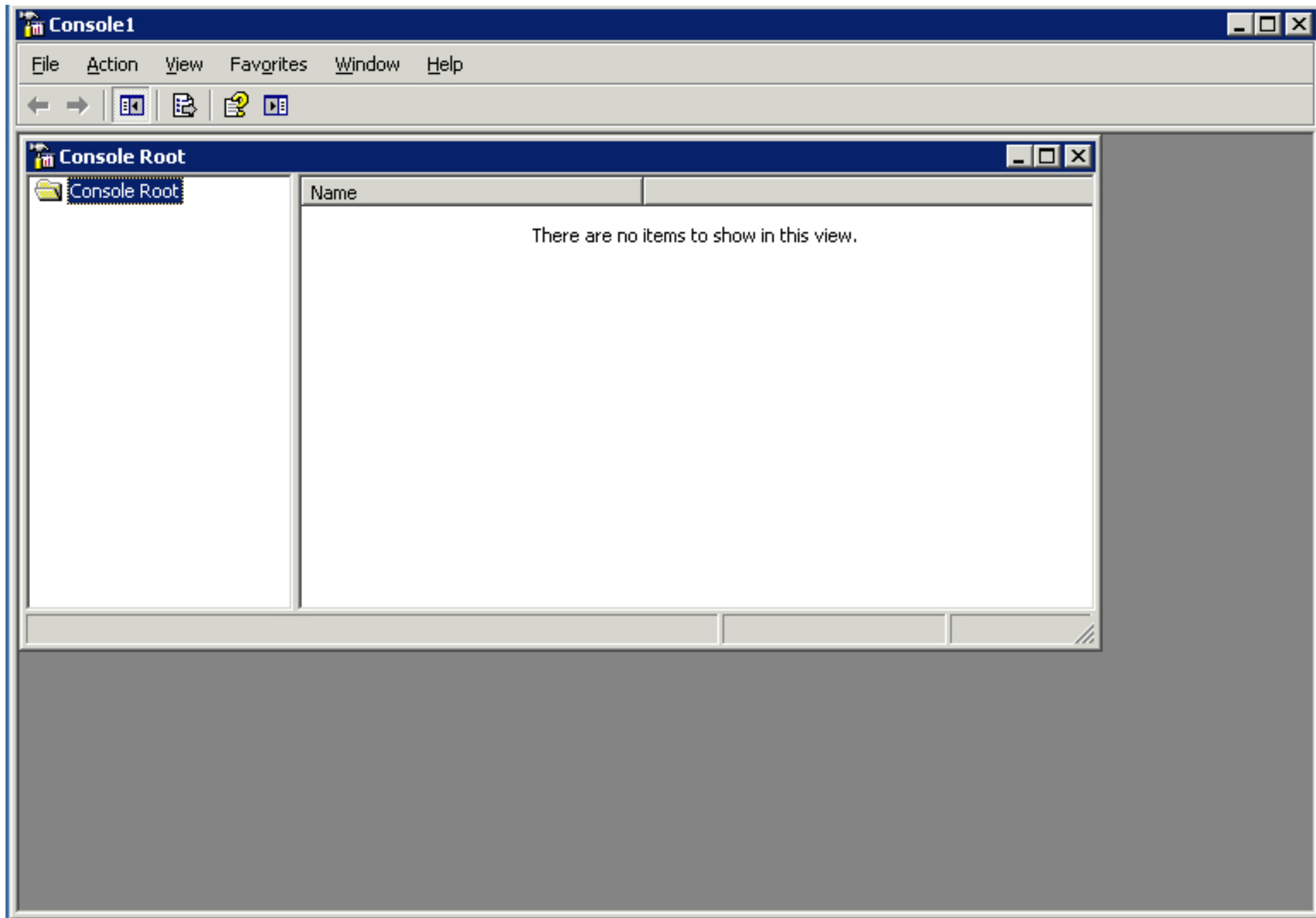- Evolution

Vital Assistance for System Administrators

Zero Administration
for Windows

O'REILLY™

Craig Zacker

Active Directory Users and Computers

File   Action   View   Window   Help

System   28 objects

Name	Type	Description
AdminSDHolder	Container	
ComPartitions	Container	
ComPartitionSets	Container	
Default Domain Policy	Domain Policy	
Dfs-Configuration	dfsConfiguration	
DomainUpdates	Container	
File Replication Service	FRS Settings	
FileLinks	fileLinkTracking	
IP Security	Container	
Meetings	Container	
MicrosoftDNS	Container	
Password Settings Conta...	msDS-Password...	
Policies	Container	
RAS and IAS Servers Ac...	Container	
RpcServices	RPC Services	
System Management	Container	
WinsockServices	Container	
WMIPolicy	Container	
BCKUPKEY_16d3e410-65...	secret	
BCKUPKEY_c3d009ce-95...	secret	

Active Directory Users and Compu
- Saved Queries
- ccis-windows.ccs.neu.edu
  - admin_groups
  - asp_users
  - Builtin
  - ccis_computers
  - ccis_groups
  - ccis_users
  - Computers
  - courses
  - defaultMigrationContainer
  - Domain Controllers
  - expired_users
  - ForeignSecurityPrincipals
  - LostAndFound
  - NetApp
  - NTDS Quotas
  - people
  - Program Data
  - softgrid_groups
  - softgrid_users
  - Speciality Users

Default Domain Controller Security Settings

File Action View Help

Security Settings
├─ Account Policies
│ ├─ Password Policy
│ ├─ Account Lockout Policy
│ └─ Kerberos Policy
├─ Local Policies
│ ├─ Audit Policy
│ ├─ User Rights Assignment
│ └─ Security Options
├─ Event Log
├─ Restricted Groups
├─ System Services
├─ Registry
├─ File System
├─ Wireless Network (IEEE 802.11)
├─ Public Key Policies
│ ├─ Encrypting File System
│ ├─ Automatic Certificate Request
│ ├─ Trusted Root Certification Au
│ └─ Enterprise Trust
├─ Software Restriction Policies
└─ IP Security Policies on Active Dire

Name	Description
Account Policies	Password and account lockout policies
Local Policies	Auditing, user rights and security options policies
Event Log	Event Log
Restricted Groups	Restricted Groups
System Services	System service settings
Registry	Registry security settings
File System	File security settings
Wireless Network (IEEE 802.1...	Wireless Network Policy Administration. Manage th...
Public Key Policies	
Software Restriction Policies	
IP Security Policies on Active ...	Internet Protocol Security (IPSec) Administration. ...

Local Security Policy

File Action View Help

Name	Description
Account Policies	Password and account lockout policies
Local Policies	Auditing, user rights and security options policies
Windows Firewall with Advanc...	Windows Firewall with Advanced Security
Network List Manager Policies	Network name, icon and location group policies.
Public Key Policies	
Software Restriction Policies	
IP Security Policies on Local C...	Internet Protocol Security (IPsec) Administration. ...

Tree (left pane):

- Security Settings
  - Account Policies
    - Password Policy
    - Account Lockout Policy
    - Kerberos Policy
  - Local Policies
    - Audit Policy
    - User Rights Assignment
    - Security Options
  - Windows Firewall with Advanced Security
    - Windows Firewall with Advanced Secu
  - Network List Manager Policies
  - Public Key Policies
    - Encrypting File System
  - Software Restriction Policies
  - IP Security Policies on Local Computer

Webmin
System
   Bootup and Shutdown
   Change Passwords
   Disk Quotas
   Disk and Network Filesystem
   Filesystem Backup
   LDAP Client
   LDAP Users and Groups
   Log File Rotation
   MIME Type Programs
   MON Service Monitor
   PAM Authentication
   Running Processes
   Scheduled Commands
   Scheduled Cron Jobs
   Security Sentries
   Software Packages
   SysV Init Configuration
   System Documentation
   System Logs
   System Logs NG
   Users and Groups
Servers
Networking
Hardware
Cluster
Others

🏠 System Information
⏻ Logout

Module Index
Help..

Add New Backup

TAR filesystem backup details

Backup format	Unix TAR
Directories to backup	/tmp

Backup to
- ● File or tape device [_____] [...]
- ○ Host [_____] as user [_____] in file or device [_____]

Remote backup command ○ Default (RSH) ● SSH ○ FTP

Password for SSH/FTP login [****]

Backup options

Backup label [_____]

Tape size ● Work out automatically ○ [_____] kB

Compress archive? [No ▼]   **Split across multiple files?** ○ Yes ● No

Follow symbolic links? ○ Yes ● No   **Limit backup to one filesystem?** ○ Yes ● No

Prompt for new tape if needed? ● Yes ○ No   **Remount with noatime option during backup?** ○ Yes ● No

Path to rmt on remote system ● Default ○ [_____]

Attempt test restore after backup to verify? ○ Yes ● No

Extra command-line parameters [_____]

Command to run before backup [_____]

Command to run after backup [_____]

Backup schedule

Scheduled backup enabled?
- ● Disabled
- ○ Enabled, after: [/home/jcameron/new-webmin.com to /backup/webmin/html.%d.tar.gz ▼]
- ○ Enabled, at times chosen below..

Email scheduled output to [_____]

Email message subject ● Default ○ [_____]

○ Simple schedule .. [Hourly ▼]   ● Times and dates selected below ..

Minutes	Hours	Days	Months	Weekdays

Done

Automation

- (current) GUIs do a bad job with:
  - Collections and Selection
  - Repetition
  - Specifying complex actions
- Scripting languages
- Knit together tools
- Fairly mature
- Powershell

Tools to Make You More Efficient
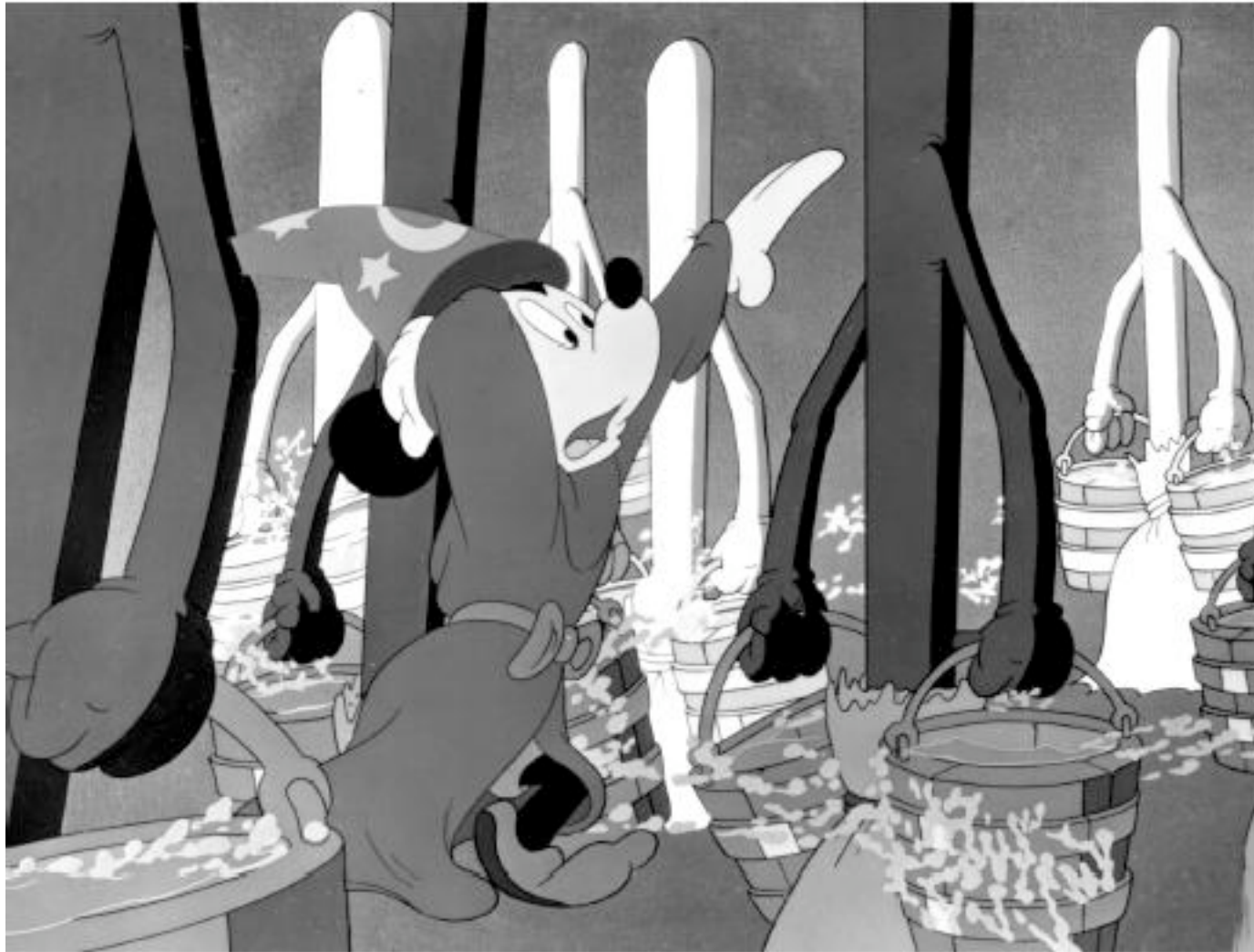
2nd Edition
Revised & Expanded

Automating

System Administration with Perl

O'REILLY®

David N. Blank-Edelman

Perils of Automation

Configuration Management

- Next step up is config management
- Still working out what this means (host, network, router, package, abstraction...)
- Acknowledge need to get away from low level in order to scale
- Maybe toddler age
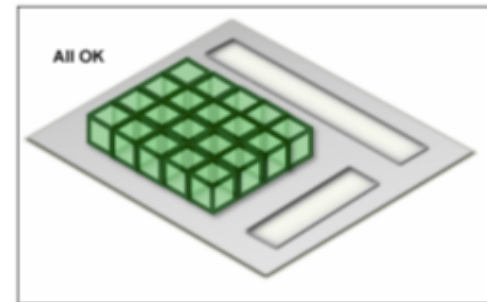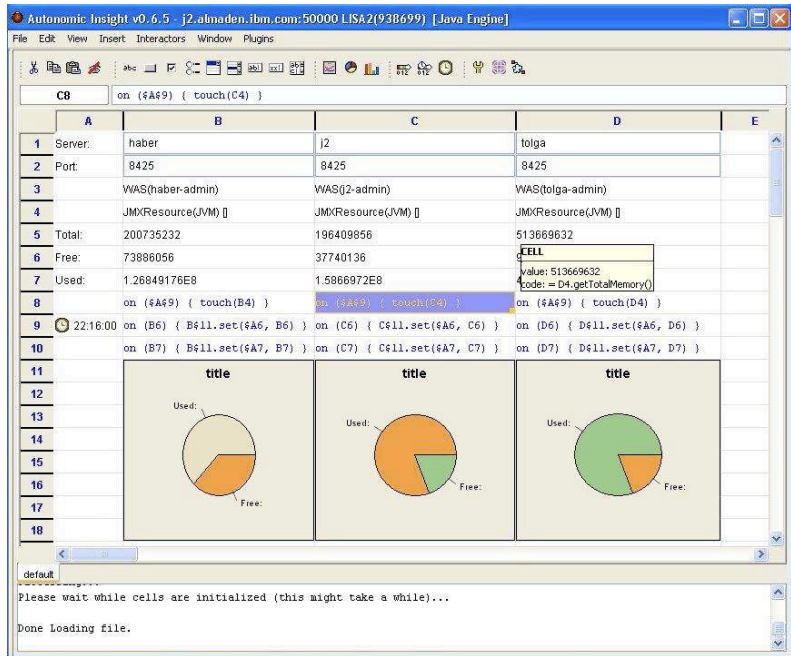- Next wave? Autonomic computing?
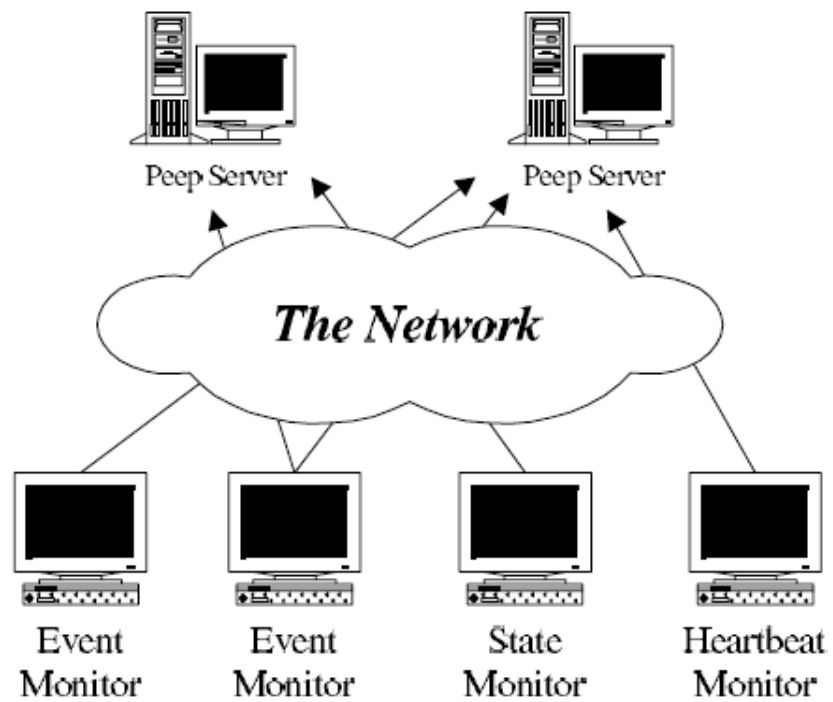
Figure 1: The Peep architecture.

Two New Interesting Interfaces

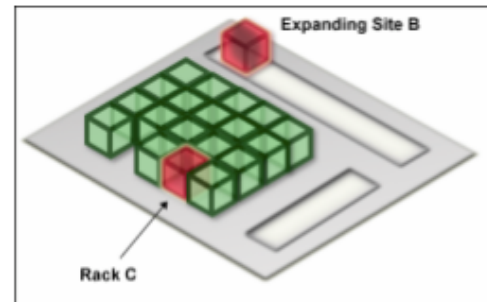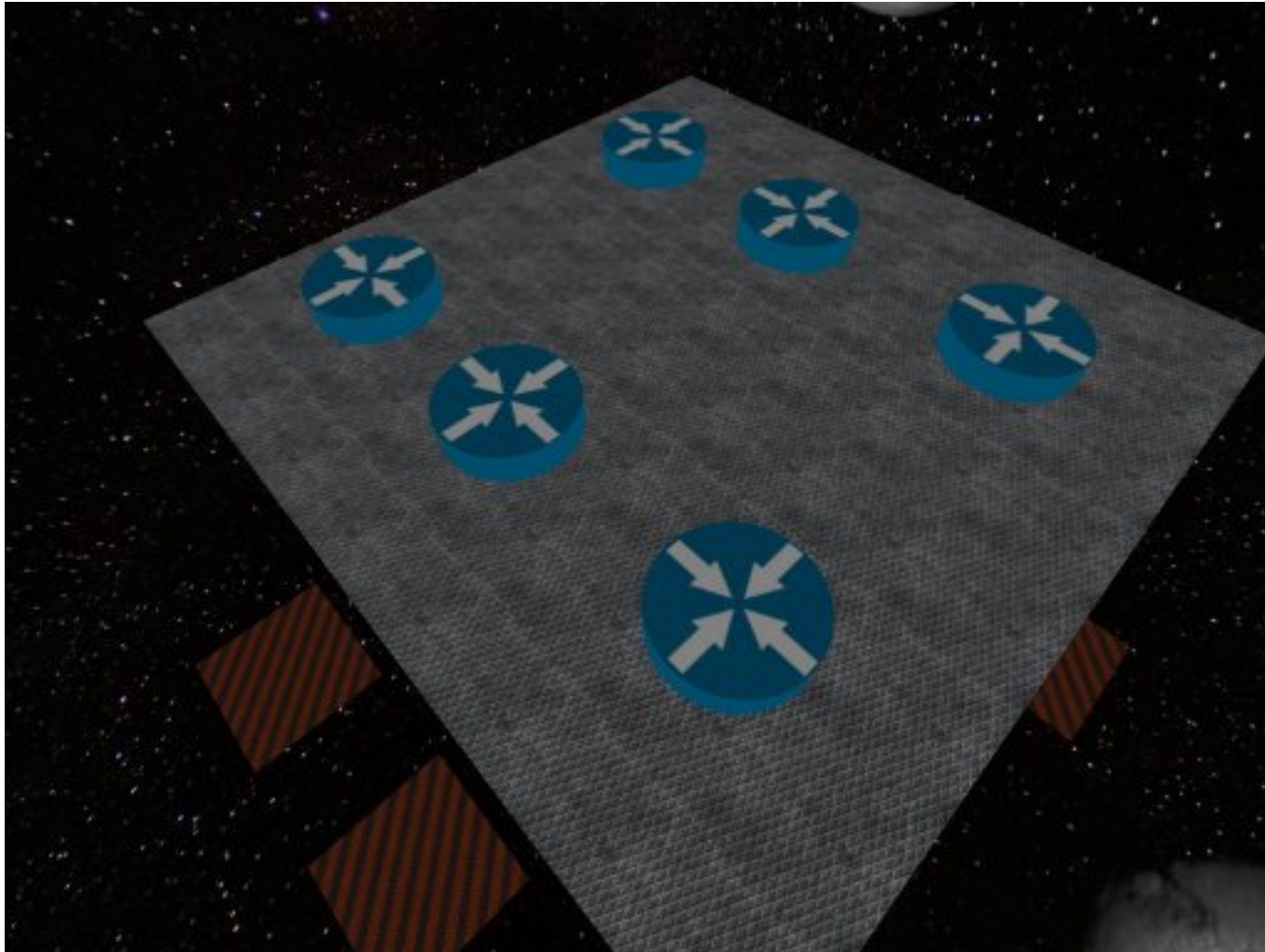Figure 4: No Problems in the System
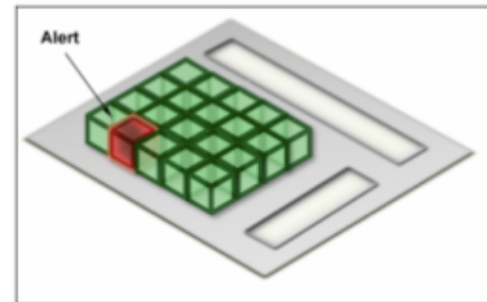
Figure 5: Alert in Site B

Figure 6: Expanding site B to find a problem in Rack C

psDoom

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BBLISA, You're Our Only Hope

- Distributed apps
- Systems/web services
- Cloudcuckooland (Cloud computing)
- Virtualization
- Ubitquity