The Path to Senior Sysadmin

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The green slides are what **I** show on the projector

Probably in a different color

In the B&W version, the projected slides are the ones on the left side of the page

The black slides are my speaking notes

In the B&W version, my speaking notes are the ones on the right side of the page

Latest Slides

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Schedule

- 1:30 – 3:00   Lecture + Q&A
- 3:00 – 3:30   Break
- 3:30 – 5:00   More lecture + Q&A

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I Promise

No "Death by PowerPoint"

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Purpose

Some *suggestions* for professional and personal growth, and to help you advance your career

Purpose

Some *suggestions* for professional and personal growth, and to help you advance your career

Purpose

Some *suggestions* for professional and personal growth, and to help you advance your career

Suggestions, Not Rules

- Everything I say is a suggestion
- May not apply to every job or person
- May apply differently at different jobs or in different sectors

Intended Audience

- Generalist v. specialist
- Any sector (.com, .edu, .gov, etc.)
- Any O/S
- Currently "mid-level"
  - "Junior" can get advice for long-term career planning

Intended Audience

- I'm going to cover generalists
  - Because that's what I am
  - And probably what most of you are
- Specialists can figure out equivalent "hard skills"

Intended Audience

- Generalist v. specialist
- Any sector (.com, .edu, .gov, etc.)
- Any O/S
- Currently "mid-level"
  - "Junior" can get advice for long-term career planning

No Xenophobia

- Speaking of O/Ses …
- I'm going to say "*nix" / "Unix" / "Linux"
  - Because I'm lazy
- Please pretend I said "the operating system of your choice"
- All the skills are the same
  - They just have different names

Agenda

- "Hard" technical skills
- "Squishy" technical skills
- "Soft" skills

Agenda

- "Hard" technical skills
- "Squishy" technical skills
- "Soft" skills

Agenda

- "Hard" technical skills
- "Squishy" technical skills
- "Soft" skills

"Hard" Skills

- Specific technical stuff
- Different for generalists v. specialists
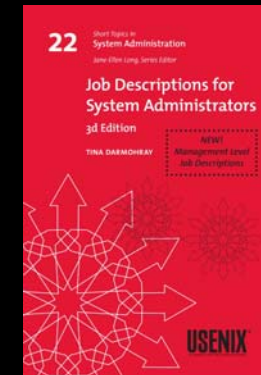- Stuff that "faces out"

Hard Skills

- Covers some of the same material as this section of the tutorial

22 *Short Topics in* **System Administration**
Jane Ellen Long, Series Editor

Job Descriptions for System Administrators
3d Edition

TINA DARMOHRAY

NEW!
Management Level
Job Descriptions

USENIX

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Agenda

- "Hard" technical skills
- "Squishy" technical skills
- "Soft" skills

"Squishy" Skills

- These are very clearly technical skills
- But not based on specific technologies (or commands or whatever)
- Some "face out"
  - Planning & analysis
- Others "face in"
  - Career growth

Agenda

- "Hard" technical skills
- "Squishy" technical skills
- "Soft" skills

"Soft" Skills

- This is the stuff that "faces in"
- It's stuff about ourselves
- A little bit of changing who we are
- A lot about changing how we deal with other people and the world around us
- These are the hardest to learn

Agenda

- "Hard" technical skills
- "Squishy" technical skills
- "Soft" skills

Soft + Squishy

- Already said "hard" will be different for specialists v. generalists
- "Soft" and Squishy apply to everyone

Bad News

Bad News

- I have some bad news for you …

Bad News

- You probably won't like a lot of what I plan to say today

Bad News

- You're not going to like a lot of what I plan to say today

Bad News

- You want to hear things like:
  - "Expert with Puppet"
  - "Deep internals of Xen"
  - "TCP 3-way handshake"

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Bad News

- You want to hear things like:
  - "Expert with Puppet"
  - "Deep internals of Xen"
  - "TCP 3-way handshake"

Bad News

- I'll say all that, but …
- You could probably figure out most of it for yourself
- It won't take you very long
- It's not very hard
- It's the least important part of this class

Bad News

Bad News

- You will probably like "Squishy Skills"

Bad News

Bad News

- But you're really going to hate "soft skills"
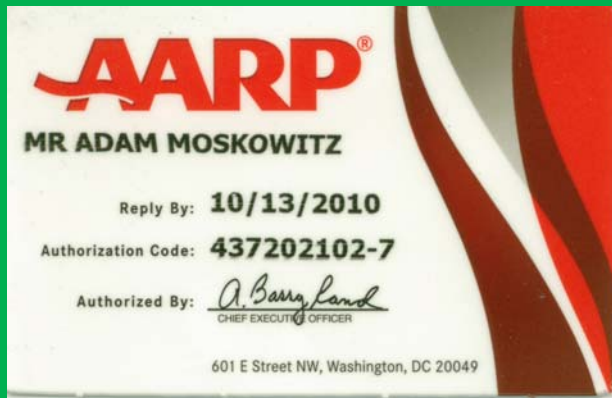- Unfortunately (for you), they're the most important
- And the hardest to learn

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Bad News

Bad News

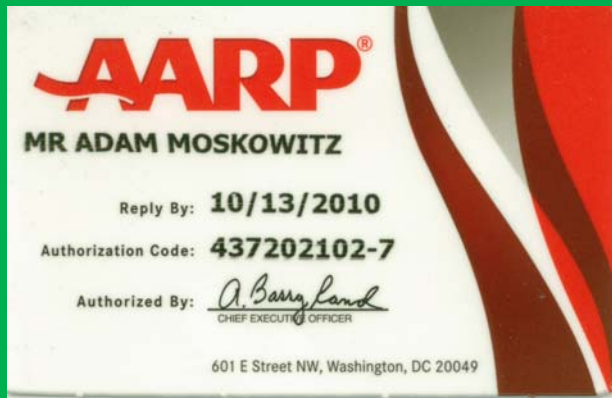- Because becoming a senior sysadmin is only a little bit about this

Bad News

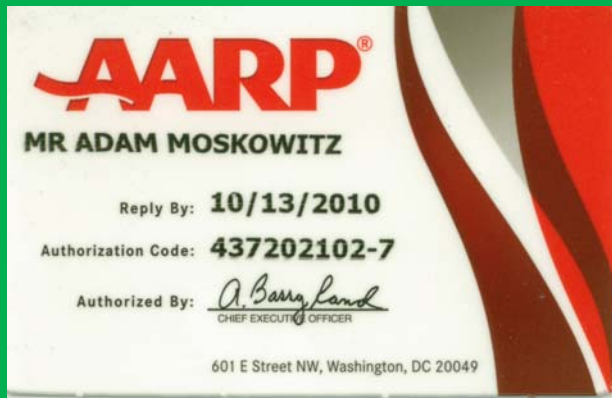# Bad News

- And a lot about this

Bad News

Bad News

- Well, not so much age as maturity

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Bad News

Bad News

- Most common manifestations of a lack of maturity:
  - Bad attitude
  - Lack of respect for your co-workers

Agenda

- "Hard" technical skills
- "Squishy" technical skills
- "Soft" skills

Let's Start Over

- Let's pretend to get off on the right foot

Agenda

- "Hard" technical skills
- "Squishy" technical skills
- "Soft" skills

No Answers

- I'm just going to list skills you need to learn
- I'm not addressing how or where to learn them
- There's not enough time today
- For most folks, just getting the list of skills is a big step forward

"Hard" Skills

- "Hard" technical skills
- "Squishy" technical skills
- "Soft" skills

"Hard" Skills

- The obvious stuff: back-ups, email, networking, printing, storage, *nix commands, etc.
- **VERY** high-level overview
  - names, examples
  - maybe why you want/need them

Hard Skills

- "Hard" technical skills
- "Squishy" technical skills
- "Soft" skills

Hard Skills

- Not everyone needs all of these skills
- Not every job requires all these skills
- These are suggestions and guidelines, not hard-and-fast rules

Hard Skills

- All "user" commands
- All "admin" commands

Hard Skills

- Full and thorough knowledge of "standard" *nix "user" commands
  - a/k/a POSIX.2
  - a/k/a (1)
- Same for admin commands
  - a/k/a (7)

Hard Skills

- All "user" commands
- All "admin" commands

Hard Skills

- Easier to solve problems if you're familiar with all the tools
- Someone in #lopsa asks programming question, thinking answer will be complicated
  - "Just use comm"
  - "Oh!"
- others: join, uniq, expr

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Hard Skills

- The boot process
  - /etc/init.d/…
  - Solaris SMF
  - OS/X launchd
  - etc.
- Run levels

Hard Skills

- Complete understanding of the boot process, run levels (`/etc/inittab`), start-up file (`/etc/init.d`)
- Alternates:
  - Solaris SMF, OS X launchd, maybe others

Hard Skills

- The boot process
  - /etc/init.d/…
  - Solaris SMF
  - OS/X launchd
  - etc.
- Run levels

Hard Skills

- For example:
  - single user → 2 → 3 → 4 → 5?
  - Or single user → 5?
- I'm pretty sure Linux is 1 → 5
- At least one older system was 1 → 2 → 3 → 4 → 5

Hard Skills

- Back-ups
- RAID, volume management
- NIS / LDAP / AD / …
- PAM
- Multi-factor authentication

Hard Skills

- Strong understanding (in general, and at least one implementation) of:
  - Back-up
  - RAID, volume management
  - NIS/LDAP/AD/…
  - PAM
  - N-factor authentication
- (Sysconfig comes later)

Hard Skills

- Programming skills

Hard Skills

- Programming skills
  - Because automation is your friend
  - Because there's always some stuff the devs won't write for you
  - To understand other people's code
- Several levels:
  - "Entry requirements": comfortable with shell, awk, and sed

Hard Skills

- Programming skills

Hard Skills

- (levels)
  - Very comfortable writing modestly complicated perl programs (with subs, "use <module>," error checking)
    - because perl is still the most widely-used and widely-understood programming language for sysadmins
    - python and/or ruby catching up but not there yet

Hard Skills

- Programming skills

Hard Skills

- (levels)
  - C
    - mostly for understanding
    - enough to understand POSIX.1
    - enough to read the kernel
      - both needed for very deep debugging
  - Assembler
    - bonus, not a requirement
    - helps with the deepest bits of the kernel

Hard Skills

- Programming skills
- Software engineering

Hard Skills

- Software engineering skills, too
  - basic version control
    - RCS (found everywhere, easy to use)
    - git, mercurial, maybe bazaar
  - used for s/w dev and for system config files (with or without sysconfig tools)

Hard Skills

- Programming skills
- Software engineering

Hard Skills

- (s/w eng)
  - variables/config parameters versus hard-coded constants
    - makes it easier to use software on more than one system or for more than one user

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Hard Skills

- System configuration
  - a/k/a configuration management
- Puppet, Chef, etc.

Hard Skills

- System configuration tools
- "The Big Four": bcfg2, chef, cfengine, puppet
  - (isconf, lcfg, pan, quattor, radmind)
- Understand their use/purpose/benefit
- Have set up one from scratch

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Hard Skills

- Networking

Hard Skills

- Networking
- Basic knowledge of common protocols:
  - IP, TCP, UDP
  - Set-up, tear-down, ARP, basic routing, etc.
- In-depth knowledge of "application" protocols:
  - DHCP, DNS, FTP, HTTP, LDAP, NFS, POP/IMAP, SSH, SMTP, Telnet

Hard Skills

- Networking

Hard Skills

- (nets)
- Solid understanding of routers, firewalls, load balancers, caches, (WAN) accelerators
- Ability to use a protocol analyzer (wireshark, NetScout)
- All required for debugging network problems

Hard Skills

- Bonus points: the kernel

Hard Skills

- Triple-bonus skill: In-depth understanding of the *nix kernel

Hard Skills

- Wait for it …

Hard Skills

- Here's one you really won't like ☺

Hard Skills

- Learn Windows (desktop)
- Learn common Office apps
  - Word, Excel, PowerPoint
- Learn Outlook
- Because it's the standard
- And you need to "play nice" with managers, executives, etc.

Agenda

- "Hard" technical skills
- **"Squishy" technical skills**
- "Soft" skills

"Squishy" Skills

- HUH? ☺
- These are very clearly technical skills
  - But not based on specific technologies (or commands or whatever)
- Some "face out"
  - Planning & analysis
- Others "face in"
  - Career growth

Agenda

- "Hard" technical skills
- "Squishy" technical skills
- "Soft" skills

Squishy

- "Out"
- Analysis, planning, design, & evaluation
  - Ability to look at "big picture" for a project
  - Figure out requirements
  - Make a plan based on analysis
  - Evaluate results
  - Includes things like roll-back, decision trees, scheduling

"Squishy" Skills

- "Big Picture"

"Squishy" Skills

- "Big Picture"
- Need to be able to figure out how all the pieces fit together
- And how pieces affect each other
  - System throughput/response time
  - Security
- …

Squishy Skills

- "Big Picture"

Squishy

- (big picture)
- Must be able to apply this to new systems during design/planning
- And to existing projects for systemic trouble-shooting

Squishy Skills

- Standards

Squishy

- "Standards"
- "POSIX"
  - "Open Group Base Specification"
  - "IEEE Std 1003.x"
  - "Single Unix Specification"
  - "Spec 1170"
- Covers the API and user commands
  - Woefully incomplete on sysadmin stuff

Squishy Skills

- Process

Squishy

- "Process"
  - "Rules" and systems for how things get done
    - Change management, disaster plans, security breaches, releases, etc.
  - Need to be able to figure out how much process is appropriate
  - And what kind of process
    - automatic or manual?
  - And for what things

Squishy Skills

- Process

Squishy

- (process)
- Also need to be able to evaluate existing process, recommend changes/improvements
  - starts to address business requirements
    - coming in a few minutes

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Squishy Skills

- Process

Squishy

- Process – if done correctly – can actually help
- Learn how to evaluate processes and effectiveness
- Learn how to change processes to improve effectiveness
  - No, that's not just throwing it all out!

Squishy Skills

- Change management

Squishy

- Change management is a great example of how process – if done well – can help
- Mistakes are expensive
- Good change management reduces the number of mistakes
- It can also limit downtime if the plan includes rollback or recovery

Squishy Skills

- Regulations and laws

Squishy

- Regulations
- SOX, HIPAA, FERPA, PCI, etc.
- Minimum is to know they exist
- Next is to be able to work with "experts" to implement any/all applicable regulations
- …

Squishy Skills

- Regulations and laws

Squishy

- (regs)
- One skill that "faces in": BE WILLING TO WORK WITHIN THESE RULES
  - Some of it is bullshit
  - But it's what we're stuck with
- Senior means doing it because it's what's required
  - And doing it without complaining!

Squishy Skills

- Regulations and laws

Squishy

- The point isn't about security
- The point isn't about making sense
- It's about complying with legal requirements
- Because that's necessary to stay in business

Squishy Skills

- Regulations and laws

Squishy

- You don't have to like it
- You **do** have to help implement it
- Ideally you should help improve it

Squishy Skills

- Business
- Specifically …

Squishy

- And that brings us to …
- Understanding (the) business
- Ahem …
- Unless your business is sysadmin consulting services …

Squishy Skills

- It's all about business!

Squishy

- Sysadmin is about supporting the business!
- EVERYTHING sysadmin does needs to have a business reason behind it:
  - meet an SLA, meet a defined risk level, conform to a regulation, build a product, enable an employee to perform his/her job, etc.
- …

Squishy Skills

- It's all about business:
  - Staying in business
  - Producing the product
  - Delivering the service
  - Making money
    - OK, maybe not for .edu ☺
  - Helping people do all of the above

Squishy

- The gear isn't there for you to do "cool stuff" with
- "Good enough": meet the requirements AND NO MORE
  - because any extra time/money is wasted

You
Ain't
Gonna
Need
It

Squishy Skills

- YAGNI

Squishy

- YAGNI
- From Agile / Extreme Programming
- "You Ain't Gonna Need It"
- Or, don't build unless there's a defined requirement
- Again, wasted time/money

Squishy Skills

- YAGNI
- BDIM: Business-Driven IT Management

Squishy

- Yes, some "economy of scale" and "planning for future growth"
- But that should be part of the business plan, too
- Some people call this BDIM: "Business-Driven IT Management"
  - I say there's no other kind!

Squishy Skills

- BDIM: Business-Driven IT Management
- The "bottom line"

Squishy

- When asked, if you can't provide the business case for a particular task (machine, whatever), management probably can't provide it either
- In which case, don't do that task

Squishy Skills

- Budgeting

Squishy

- Budgeting
- Part of the business side of sysadmin
- Your manager will probably do most of the work
  - But needs accurate data from you
  - And that requires long-range planning, analysis, etc.

Squishy Skills

- Your manager

Squishy

- Skills that "face in" …
- Similar to budgeting, you're likely to know more about the technical side of IT than your manager
- THIS IS OK!
- LEARN TO ACCEPT IT!
- …

Squishy Skills

- Your manager

Squishy

- Managers manage people
  - Senior sysadmins manage technology
- Managers may never have been sysadmins
  - Because so many sysadmins have bad people skills and thus make lousy managers
- Again, it's not the manager's job to be the technology expert

Squishy Skills

- Your manager

Squishy

- This means you can't ask your manager for technical help
- You have to learn how to learn new things on your own
  - Quickly
  - With limited resources
  - From incomplete or incorrect documentation

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Squishy Skills

- Who to ask for help?
- Not your manager ☺

Squishy

- You also need to develop a network of people you can ask for help:
  - People you meet at LISA ☺
    - Or SCALE or OLF or …
  - LOPSA / SAGE / USENIX
    - Mailing lists, IRC, personal contacts
  - Local sysadmin groups
    - Back Bay LISA / BayLISA / …

Squishy Skills

- Professional development

Squishy

- Professional development
  - LISA, PICC, Velocity, etc.
  - Even if you have to pay for it yourself

Squishy Skills

- Professional development

Squishy

- You need to stay abreast of the literature
  - Minimum = LISA proceedings
- Probably should read / keep up with some "near field" stuff as well
  - DB / SQL
  - UI / CHI
  - Programming

Squishy Skills

- Books

Squishy

- Sort-of related to learning: books
- You ought to have your own reference books
  - So you can take them with you when you change jobs
- Not going to give you a list
  - It changes too quickly

Squishy Skills

- Books

Squishy

- Ought to include:
  - One O/S design text
  - One language reference
  - One sysadmin reference
    - like Nemeth et al. or Limoncelli et al.
  - One networking reference

Squishy Skills

- Asking for help
  - Knowing when to ask

Squishy

- Know when to ask for help
- Mainly for programming help
  - Because some things, especially those intended for end users, would benefit from solid S/W engineering

Squishy Skills

- Asking for help
  - Knowing when to ask

Squishy

- Also for sysadmin help
  - If the operation has the potential for large-scale disruption
  - Or it's hard to roll back if it goes wrong
- In this case, could get help from someone less experienced
  - Make yourself explain it to the other person
  - And don't continue until they (and you) fully understand it
  - OK, maybe that's overkill

Agenda

- "Hard" technical skills
- "Squishy" technical skills
- **"Soft" skills**

"Soft" Skills

- This is the stuff you probably don't want to hear

Pay Attention!

Pay Attention!

Pay Attention!

- Please notice your "gut" reaction to this next section

Pay Attention!

- Please notice your "gut" reaction to this next section

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Pay Attention!

- Please notice your "gut" reaction to this next section
- The more you don't like what I'm saying, the more you probably need to hear it
- And the harder it will be for you to learn

Pay Attention!

- Please notice your "gut" reaction to this next section
- The more you don't like what I'm saying, the more you probably need to hear it
- And the harder it will be for you to learn

"Soft" Skills

- This is the stuff you probably don't want to hear
- Please listen anyway

"Soft" Skills

- This is the stuff you probably don't want to hear
- This is almost certainly the stuff you need to hear the most
- It's also probably going to be the hardest for you to learn
- Because sysadmin is about people (and business) **not** technology!

Soft Skills

- It's all about people!
  - Well, people and business
  - But mainly people
  - Because people are who make the business happen

Soft Skills

- Yes, people, not technology
- "But I'm not 'a people person'"
- As a senior sysadmin, you need to change this about yourself
  - Or learn to fake it really well

Soft Skills

- It's all about people!

Soft Skills

- Like it or not, extroverts win
- It may not be fair, but it's how the game is played
- The rules aren't likely to change in your lifetime
- So learn to play by the rules or accept that you can never win

Soft Skills

- It's all about people!

Soft Skills

- With all that in mind …
- Let's dive into "soft" skills

Soft Skills

- Attitude
- Attitude
- Attitude
- A few "people skills"
- Attitude
- One "hard soft" skill

Soft Skills

- Attitude
- Attitude
- Attitude
- A few "people skills"
- Attitude
- One "hard soft" skill

Soft Skills

- It's all about people!
  - And how you deal with them

Soft Skills

- Yes, people and business, not technology
- I said this in "squishy": Machines exist to perform business functions
- Sysadmin is about keeping those machines running
- And about helping people use those machines

Soft Skills

- Be helpful and friendly

Soft Skills

- Attitude #1: Be helpful and friendly
- If people don't ask for help because sysadmins make them uncomfortable, those people won't be effective when there are problems
- You have failed to perform your job
  - (of helping those people)

Soft Skills

- Be helpful and friendly
- Your job is to help
  - Help the people
  - Help the business

Soft Skills

- Worth repeating
- Your job is to help the business
  - Keep machines running
  - Help people use the machines
- Have to stay within security/PCI/etc. but the goal is to "get to yes" and not "just say no"

Soft Skills

- Be helpful and friendly
- Your job is to help
  - Help the people
  - Help the business

Soft Skills

- Part of this is giving the answer most helpful to the person asking
  - In terms they will understand!
- Being pedantic doesn't help
- Being snide doesn't help
- Saying "don't do that" doesn't help

Soft Skills

- Be helpful and friendly
- Your job is to help
  - Help the people
  - Help the business

Soft Skills

- Don't answer a question the person didn't ask
- If what the person is asking doesn't make sense, ask him/her to clarify
  - Or ask questions to understand the real problem the person is trying to solve
- Remember, the goal is "getting to 'yes'"

Soft Skills

- Respect

Soft Skills

- Attitude #2: Respect other people in the company
- They know less about computers than you do
  - Probably a LOT less
- IT'S NOT THEIR JOB to know a lot about computers
  - If it was their job, the company wouldn't need to hire you!

Soft Skills

- Respect

Soft Skills

- Attitude #3: More respect
- Other people ARE NOT STUPID!
- Many of them are experts in their own fields
- They can't solve computer problems …
- You can't solve nuclear physics problems
- Doesn't make either of you stupid!

Soft Skills

- Example:
- I use an IBM ThinkPad X-61
- My wife uses a Mac iBook
- Very different physically:
  - Different latch
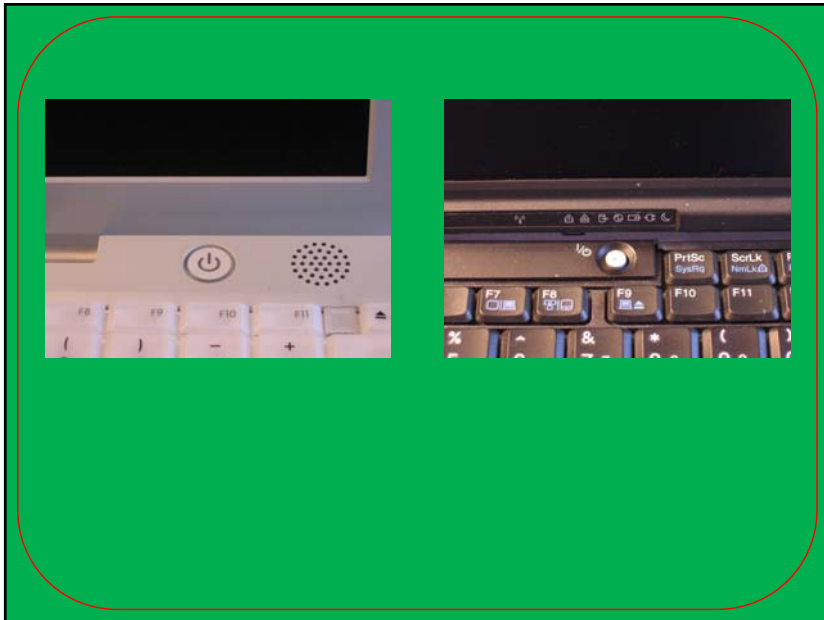 - Different on/off switch
  - Different pointing devices
  - Different buttons

Soft Skills

- While on vacation, she tried to use my X61, and had to ask …

- How do I open it?

- How do I turn it on?

- Which button clicks the mouse?

"Boy, is she dumb!"

- "Boy, is she dumb!"

7,500 hrs = my wife

- She has ~7,500 hours experience using a computer

7,500 hrs = my wife

120,000 hrs = me
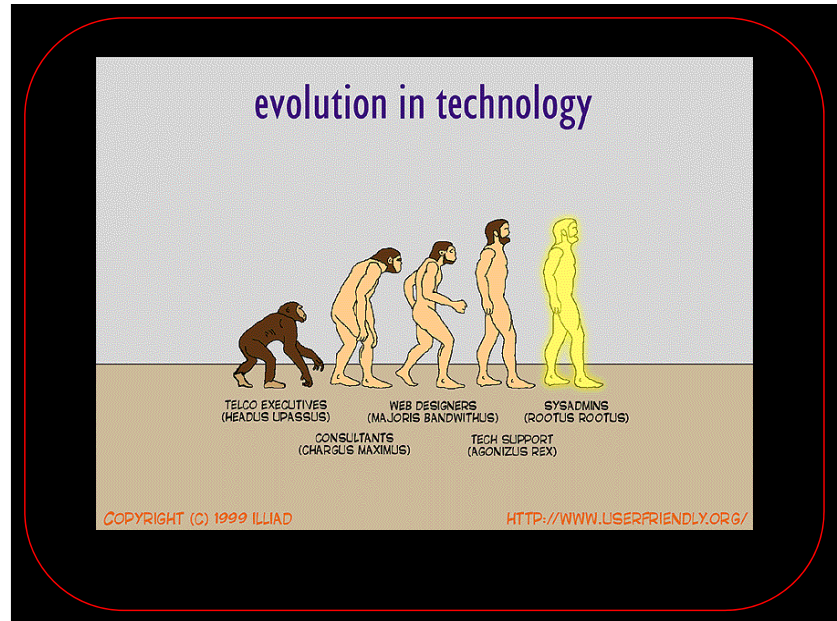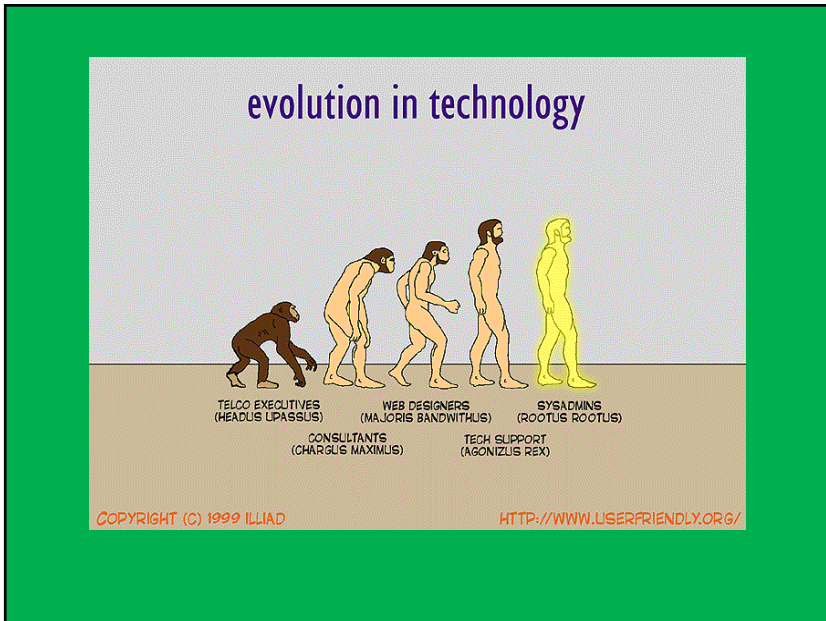
- I have ~120,000 hours experience

7,500 hrs = my wife

x 16

120,000 hrs = me

- That's a factor of 16

x 16

- 16!
- That's a lot!
- Most sysadmins forget how big a gap that is

Soft Skills

- It's a joke
- But it's also insulting

Soft Skills

- As a joke it's mildly amusing
- Too many sysadmins take it seriously
- Don't do that
- You are not better than your co-workers
  - And maybe not even smarter
- You simply know more about computers than they do

Soft Skills

- Managers

Soft Skills

- Speaking of telco executives …
- Learn how to talk to managers
  - Give appropriate level of detail
  - Approach from business perspective
  - Solid reasoning, not dogma or cargo cult

Soft Skills

- Managers

Soft Skills

- (managers)
- If your manager isn't (wasn't) a sysadmin, s/he is going to depend on you for advice on the technical side of things
- If you can't give useful answers, your manager will move you aside and use someone else

Soft Skills

- Developers

Soft Skills

- More being helpful …
- When the developers you work with give you bad software, rather than bash them, GO WORK WITH THEM to help them fix the problem
- Help them understand the problem

Soft Skills

- Developers

Soft Skills

- Which is more likely to get results?
- Complaining to fellow sysadmins about "stupid developers"
- Or asking the developers to fix the software?

Soft Skills

- Developers

Soft Skills

- The developers may say "no"
- Most likely they'll say "you need to get it added to our schedule"
- That's as good as a "yes"
- Why?
- …

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Soft Skills

- Developers

Soft Skills

- Because now you can go to your manager with a specific request
- "Hey boss, there's a problem with the latest release of the software …"
- "I talked with the developers to figure out how to fix it …"
- "But I need help from you to get it onto their schedule."

Soft Skills

- What your manager wants to hear

Soft Skills

- Your boss likes it when you come to him/her this way:
  - You identified a problem
  - You did as much as you could to solve it
  - You recognized when you couldn't do any more
  - You identified what else needed to be done and by whom

Soft Skills

- Traits of senior employees

Soft Skills

- All of those are skills senior people have
- Whining to your peers is not something senior people do
- Whining to your *boss* is something only very junior people do
  - Or people who want to get fired

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Soft Skills

- Back to those developers …

Soft Skills

- Getting back to the developers …

Soft Skills

- Developers

Soft Skills

- Developers are not dumb
- Usually they're just not familiar with ops requirements
- Or, more likely, ops stuff never made it into the design, so it's not on the devs' schedule
- In which case, work with the designers
  - Because this isn't the devs' fault

Soft Skills

- One "hard soft" skill
  - But you still won't like it ☺

Soft Skills

- I mentioned one "hard soft" skill …
- Public speaking
- Well, not really "public speaking" as "giving presentations at work"

Soft Skills

- "Workplace presentations"

Soft Skills

- (presentations)
- Need to present to:
  - your group
  - other groups
  - your manager
  - 1st- / 2nd-level managers
  - executives

Soft Skills

- "Workplace presentations"

Soft Skills

- (presentations)
- Many people **hate** this
  - Not just sysadmins, not just techies
- You have to learn to do it
  - And do it reasonably well
- Because giving presentations will be part of the job of the most senior technical person on the team

Soft Skills

- "Workplace presentations"

Soft Skills

- (presentations)
- Again, if your boss can't depend on you to do these, you're not likely to get promoted to that senior position

Soft Skills

- "Workplace presentations"

Soft Skills

- (presentations)
- Actual "public speaking" is what you'll see on Wed-Thu-Fri
- But the skills are pretty much the same
  - Although it should be easier in a small(er) setting inside your company
- "Workplace presentations" are the minimum you need to learn to do

Soft Skills

- "Workplace presentations"
- Public speaking

Soft Skills

- (presentations)
- However …
- Getting a paper or talk accepted at a conference is a good way to get your boss to send you ☺
- But for that you'll need to go to the next level of actual "public speaking"

Soft Skills

- **No whining!**

Soft Skills

- I've talked about process, change management, SOX / HIPAA / et al., learning Windows, dealing with developers
- Most important thing: **no whining!**

Soft Skills

- **No whining!**

Soft Skills

- It's OK to question these things
  - IF you are doing it purely on a technical level
  - AND doing it fairly, without bias
  - AND with the intent of improving things
- In fact, suggesting changes is a good thing

Soft Skills

- **No whining!**

Soft Skills

- Whining about any of these is Very Bad
- Your boss doesn't want to hear you whine
- People who whine are not the people who get promoted to senior

Soft Skills

- **No whining!**

Soft Skills

- Because part of being senior is accepting things
- And working to change them for the better
- But not whining about it!
- Your attitude is almost as important as your actions

Soft Skills

- Almost done …

(almost done)

OK, A Few Answers

- Find a mentor

OK, A Few Answers

- For soft skills, find a mentor
  - A good manager
  - Probably NOT a techie
- Might find someone through the LOPSA Mentorship program
  - But someone you work with might be easier
  - Again, doesn't have to be technical

That's All, Folks

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