



# Linux Clusters Institute: High Performance User Support

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## Target Audience:

IT professionals with little or no experience with supporting High Performance Computing users

## Goal of this Session

Before I came here I was a User Support professional. Having listened to your lecture I am still a User Support professional. But on an HPC level.

# Overview

- Some baseline points – define, differentiate
  - Goals? We don' need no stinking goals...
- The User Support at the management level (big picture stuff)
  - Know your boundaries
  - How: methods and/or madness
- The User Level (one on one stuff)
  - Who are they and what do they want?
  - How: methods and/or madness
- Outreach and Education
- Challenges

# What is User Support (US)?

- Provide technical assistance to computer users. Answer questions or resolve computer problems for clients in person, or via telephone or electronically.

# How Does/Can HPC User Support Differ?

- Problems cover a much broader range
  - From desktops to clusters
  - More esoteric
  - Frequently very domain specific
- HPC can be collaborative
- Few opportunities for general training
  - Not really a formal set of certifications



# What Do These Differences Mean for HPC User Support?

- HPC user support personnel have to be adaptable
- Greater need to relate to people from their perspective
- Often need to understand some science as well as computers

# What Are The Goals of US?

- Bring users and resolutions together
- Advance research goals
- Reduce user frustration
- Minimize impact on User Support personnel



# Management



# Understand the World You Live In

- Funding/Budget
- Staffing
- Political will
- Know your boundaries
- Policy



photo by Hans van de Vorst

# What Sort of Organization Do You Work In?

- Inside out?
  - Rely on internal
    - strengths and capabilities
    - resources and offerings
- Outside in?
  - Customer centric
  - Requires both insight and action
  - Can you afford it?
- Can the org be both?

# How?

- Methods and Madness
  - Iron Curtain: only admins have access to systems
  - Guerrilla IT
- Deep and Wide?
  - What is deep? What is wide?
  - Which is better?
- Involve the research community
- Outside-in or Inside-out?



## The User Level

# The User Level

- Who are they and what do they want?
  - Challenges
- How: methods and/or madness
  - Skills that matter
  - Managing expectations
  - Issue ingest

# Us... Them...



# Users: Who Are They and What do They Want?

- Hands off Principal Investigators (i.e., Faculty)
  - Big research picture
  - Just want to know the tools needed are available
  - Only hear from them if something big is broken

# Users: Who Are They and What do They Want?

- Hands on Users (faculty, staff, students, collaborators)
  - Doing the actual work
  - Want simple, fast solutions to complex problems
  - Little tolerance for bureaucracy
  - Full spectrum from users who need copious hand holding to users who just need one word hints.



# Challenges

- Regular users want instant gratification. HPC users can be worse.
  - No reading
  - No talking about it
  - Just tell me how to fix it!
- User Pride
- Ground Zero Users (power button?) vs Power Users
- Adapting to your audience
- Splash damage

# Customer Support Skills that Matter

- Patience
- Communication Skills
  - Listening *and* Speaking
- Interpersonal Skills
- Know of What You Speak
- Positive Language
  - Never say no
- Time Management
- Follow Through
- Willingness to Learn

# Managing Expectations

- Policies
- Clear timelines
- Regular and relevant updates
- Openly discuss solutions
- Transparent and honest

# Issue Ingest

- Help Desk?
- Ticketing system
- Shared help email?

# Conflict in Shared Environments

- Within a research group
  - PI's handle; US can advise
- Between research groups
  - Avoid getting directly involved; advise
- Between clients and HPC support staff
  - Complicated
- Between clients and other IT support groups
  - Complicated



# Conflict in Shared Environments



# Education/Outreach



# Education

- Web
  - Great for self-service
  - Don't get too much advice
- Classes and Seminars
  - Target specific topics



# Outreach

- Grant Writing Help
  - hardware specs, software licenses, quotes
  - letters of support
  - contribute portions of the grant
  - Take the lead on new grants for more resources in house with researcher input



# Today's Challenges

- BYOD
- Big Data/Data Analytics age
- Data publication and curation
- Meeting demands not addressed by conventional IT

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Thank you for participating!

Any Questions?

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