Supporting Users/Partners

- Point of Contact model
- Work Plans
- Service Request Management
- Impersonation
- Community Codes
- Enhanced Support
Point of Contact Model

• Each major or strategic science team is assigned a Point of Contact (PoC) for the duration of their Blue Waters project.
• It’s a win-win model: science teams have a known person to contact for help and the Blue Waters project have a staff member who is knowledgeable of the team’s work.
  • The PoC, who is already familiar with that team’s software and science, can assistance quickly.
  • The PoC can assist in campaign planning; pulling in other staff experts as needed (ex: storage and system admin).
• Not all PoCs are domain experts and PoCs are assigned to several teams.
• This high level of service enables greater productivity from the science teams' questions and concerns.
Work Plans

• Requests for extended assistance requires development of a work plan that is reviewed and accepted/rejected.
• Workplans establish a set of milestones and deliverables.
• Work plans help with staff load balancing and put everyone on same page.
• Support Work plans in HPC support are now more common.
  • NSF’s XSEDE Extended Collaborative Support Services (ECSS).
• Plans are collaborative. Results should be self-supportive.
Service Request Management

- (Nearly) all service requests and reported issues (email, web, phone, chat, in person) result in a ticket in our issue tracking system.
- Staff create tickets on the user’s behalf when issues are reported via phone, chat and in person conversations.
- Response times are tracked with a goal of a human generated response within four business hours. No “automatic” response.
- Resolution times tracked; goal of 80% resolved within 3 business days.
- All open tickets are reviewed once per week.
- After two attempts over a 14 day period tickets without a response from the user are closed.
Service Request Management

- NCSA moved to Jira.
- Affordable. Customizable.
- “bots” determine project metadata based on “reporter” including Point of Contact.
- Settings permit staff “many-eyes” view.
User Impersonation

- Members of support staff can impersonate users on Blue Waters.
- Expedites user support
  - Allows support staff to build and/or run code in a user’s environment.
  - Avoids non-sysadmin staff having root access or bothering sysadmins to access files.
  - Avoids having user to change acl on files and directories.
- Access logs are kept for accountability.
- Separate shell history avoids polluting user history, requiring some shell specifics.
- Shell prompt set to make clear shell is impersonating someone.
- Uses a sudoers exclusion list to limit what staff can impersonate.
- Staff cannot impersonate other staff.
Support of Community Codes

- Early on Blue Waters project documented compilation and use instructions for community codes that were ported to Blue Waters on the user portal; making them publicly available.
- Community codes often come without detailed compilation instructions for Cray systems and it is often a challenge to compile community codes on Cray systems.
- The process reduces the cost of application support and shares that knowledge with the community.
- In some ways this can be replaced with use of tools like spack and easybuild.
Enhanced Support

- Blue Waters successfully implemented a multi-year program to coordinate funded application improvement with “implementation experts” and research teams.
- 20 research teams worked with Blue Waters Points of Contacts and experts in CUDA, OpenMP, HDF5, IO, FFTs, Workflows.
  - Developed work plans with baseline performance requirements.
  - Research teams required to have someone involved.
  - Regular status meetings.
- Most codes achieved significant improvement.
## NGA Projects on Blue Waters

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