



## Operations Working Group

## Summary

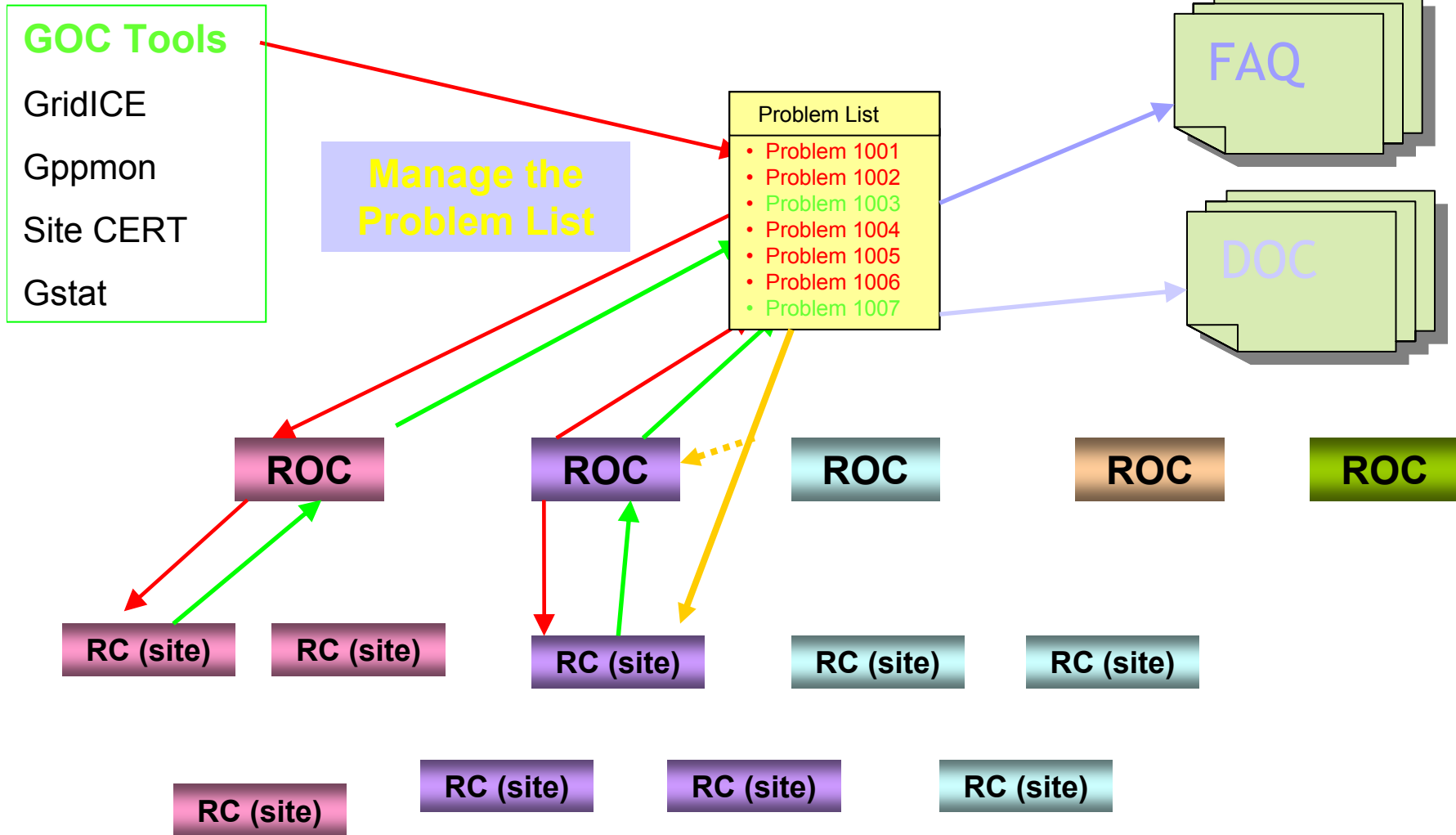


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- What is the workflow for operations support?
  - Who participates – in which roles?
  - Escalation procedures, agreement to responsibilities / penalties?
  - How to manage small/bad sites?
  - What is the daily mode of operations and monitoring?
    - “Opsman” → handover procedures etc.
  - Deployment procedures
- What tools are needed to support this?
  - Who will provide them?
- How to approach “24x7” global operations support?
  - How this affects workflow; external collaborations
- What is the interaction/interface to user support?
- Communication channels?
  - Operations weekly meeting?, RSS, IRC, ...
- Political level agreements on accounting/info gathering granularity
- Milestones (needed for all working groups)
  - Concrete set of reasonable milestones
  - Fit with service challenges; validate the model; monitoring of milestones
- Working groups needed for the longer term?



## Model I Strict Hierarchy (modified)



- CICs locates a problem with a RC or CIC in a region
  - triggered by monitoring/ user alert
- CIC enters the problem into the problem tracking tool and assigns it to a ROC
- ROC receives a notification and works on solving the problem
  - region decides **locally** what the ROC can to do on the RCs.
    - This can include restarting services etc.
    - The main emphasis is that the region decides on the depth of the interaction.
    - ==> different regions, different procedures
  - CICs NEVER contact a site
    - .====> ROCs need to be staffed all the time
    - ROC does it is fully responsible for **ALL** the sites in the region
- CIC can contact site directly and notify ROC
  - ROC is responsible for follow-up

# Model I Strict Hierarchy



- Pro:
  - Best model to transfer knowledge to the ROCs
    - all information flows through them
  - Different regions can have their own policies
    - this can reflect different administrative relation of sites in a region.
  - Clear responsibility
    - until it is discovered it is the CICs fault then it is always the ROCs fault
- Cons:
  - High latency
    - even for trivial operations we have to pass through the ROCs
  - **ROCs have to be staffed (reachable) all the time. \$\$\$\$**
  - Regions will develop their own tools
    - parallel strands, less quality
  - Excluded for handling security



- CIC-on-duty (described by Lyon)
  - Responsibility rotates through CIC's – one week at a time
  - Manage daily operations – oversee and ensure
    - Problems from all sources are tracked (entered into PTS)
    - Problems are followed up
    - CIC-on-duty hands over responsibility for problems
  - Hand-over in weekly operations meeting
- Daily ops:
  - Checklist
  - Various problem sources: monitors, maps, direct problem reports
  - Need to develop tools to trigger alarms etc



- Cannot avoid local PTS's
- But must have central aggregator
  - Where COD manages problems, new problems entered
  - Use GGUS
  - Needs interfaces – automatic ticket updates in linked systems (both directions)
  - Needed to build knowledge db etc.



- Need service level definitions (Grid 3 site charter)
  - What a site supports (apps, software, MPI, compilers, etc)
  - Levels of support (# admins, hrs/day, on-call, operators...)
  - Response time to problems
  - Agreement (or not) that remote control is possible (conditions)
- Sites sign-off on responsibilities/charter/SLD
- Publish sites as bad in info system
  - Based on unbiased checklist (written by CICs)
  - Consistently bad sites → escalate to political level GDB/PMB
- Small/bad sites
  - Remote management of services
  - Remote fabric monitoring (GridICE etc)





- How to formally capture site feedback
  - Priorities for next release, ...
- Web page where info is presented
  - What's in releases, etc.
- How to "force" sites to deploy new releases
  - ROC responsibility
  - Mark site as "bad"
  - Escalation to GDB, EGEE PMB



- GDA → Operations weekly meeting
- (Grid3 daily mtg service desk+engineers)
  - Could be a model within regions → ROCs + sites
- General news info page
- RSS customised feeds
  - Various communities
  - General users
- “Run control” – messaging/alarm aggregation – sends messages/notifications to ops consoles
- Use (eg) Jabber as comm tool between CICs (and other operators – ROCs)
- Mailing lists
  - Rollout
  - Announcements (GOC web page – make people look daily)



- GGUS + interfaces to Savannah + local PRMS's
  - (start with Savannah as central aggregator)
- Monitoring console
  - Monitors (mostly have now)
  - Frameworks – to allow stats and triggers of alarms, notifications, etc.
- GSI-enabled SUDO (etc) for remote service management
- Fabric management “cook-book”
- Remote fabric monitors



- Separate security (urgent) from general support
- Distributed CIC provides “24x7” by using EU, Taipei, America
- Real 24x7 coverage only at Tier 0 and 1
  - Or other specific crucial services that justify cost
  - Loss of capacity – vs damage
  - Classify what are 24x7 problems
- Direct user support not needed for 24x7
  - Massive failure should be picked by operations tools



- Same structure as for ops support
  - Regional support is needed, but central aggregation (might need language translation)
  - Need inter-ROC agreement on common formats etc.
- Users free to submit anywhere (local or global)
- All in same PTS → GGUS (ops and user)
- Documentation and example repository needed in central place
- Coord done by ROC managers
- Still need to clarify workflows and make sure people are in place to do the support
- GGUS becomes “the” central problem tracker
  - Essential that have rapid evolution as we learn the processes



- Explicitly OSG/LCG-2:
  - Share VO-level experiences
  - Common (core) policies and procedures as far as possible
    - E.g. site charter
  - Agree a common terminology
  - Interoperability makes this more important
- Agreed start regular discussions on this
  - Initial points of contact Doug and IGB



- CIC's on Duty start for now with existing tools
  - Document procedures for follow up and problem identification → checklist of daily tasks
  - Follow up discussion at GDA next week
- Aggregate page for monitoring tools, alarms, etc.
  - Deno in den Haag
- Template site service level definition
- GOC news page as "the" reference
- Replace GGUS interface with Remedy 6 (end Nov)
- Demonstrate ticket interchange INFN-GGUS (next week)
- Investigate experiment-level support to ensure that GGUS workflow works
- ...



## Not covered:

- Accounting/info gathering – high level agreements
- Longer term groups needed...
  - Tools, cookbooks, support
  - Fabric management tools for smaller sites