

Administering Inca with incat

Jim Hayes
jhayes@sdsc.edu

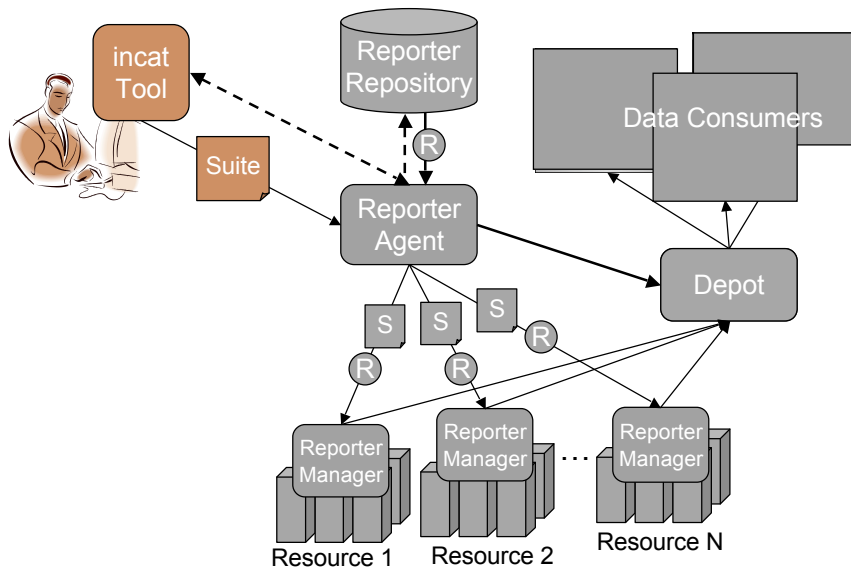
Inca 2.0 Workshop
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SDSC

SAN DIEGO SUPERCOMPUTER CENTER

inca

Architecture overview



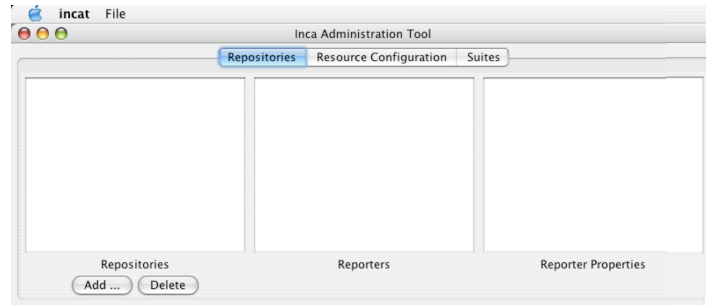
Outline

- **Launching incat**
- **Adding repositories**
- **Adding resources**
- **Managing suites and report series**

Launching incat

- **“inca start incat” to start**
- **Can work with a local file (`--file path`), a Reporter Agent (`--agent host:port`), or both**
- **Retrieves existing configuration from Reporter Agent and/or loads specified file**

incat Display

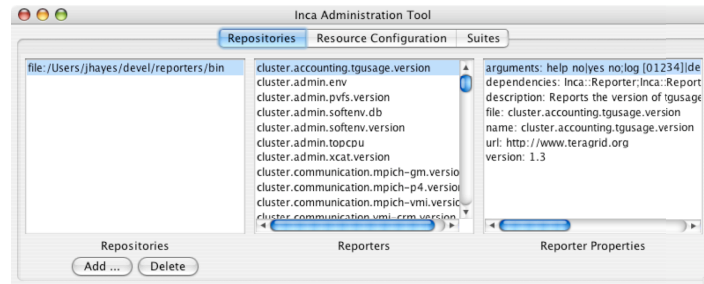


- **Tabs for repository, resource, and suite**
- **File Open/Save/Save As menu**
- **File/Commit sends to Reporter Agent**

Outline

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Repositories Tab

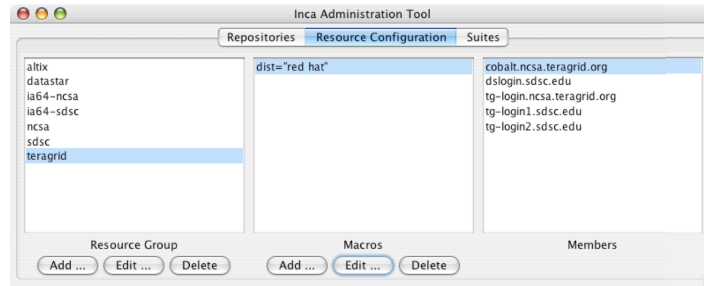


- Repository list, reporter summary, reporter properties
- Reporter information retrieved from Reporter Agent
- Repository URLs relative to Reporter Agent

Outline

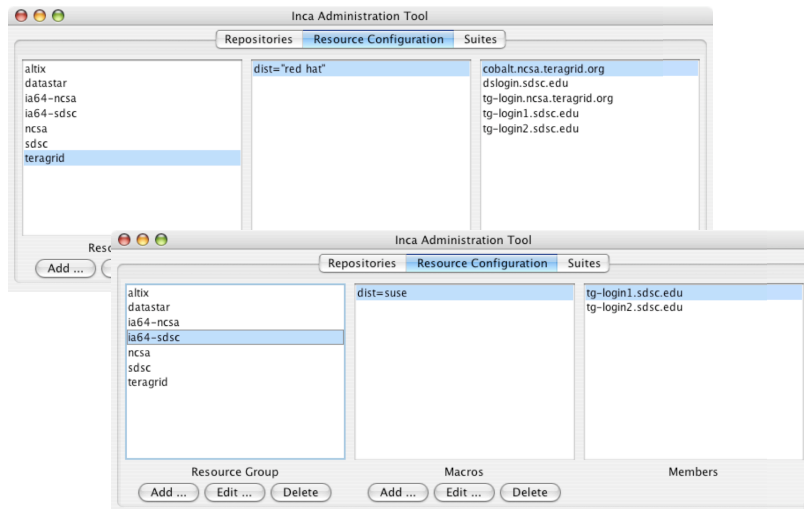
- Launching incat
- Adding repositories
- Adding resources
- Managing suites and report series

Resource Configuration Tab



- Resource group name, associated macros, member hosts
- Groups of groups supported
- Macro for most specific group applies

Resource Panel (cont.)



Using Ssh Resources

A screenshot of a configuration window titled 'ia64-sdsc'. It contains several input fields and checkboxes. The 'Access Method' is set to 'ssh'. The 'Group Name' is 'tg-login[12].sdsc.edu'. The 'Members' checkbox is checked, and the 'Round Robin' checkbox is also checked. The 'User Id' is 'inca'. The 'Key File' field is empty. The 'Install Directory (home)' field is empty. The 'Proxy Server' field is empty. The 'Proxy User ID' field is empty. The 'Proxy Password' field is empty. The 'Proxy Lifetime' is set to '1440'. There are 'Cancel' and 'Ok' buttons at the bottom.

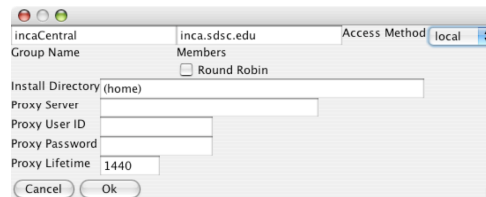
- Member specification allows choice (|) and character sets ([|])
- Round Robin resources considered equivalent—one Reporter Manager
- Passwordless ssh key, for now

Using Globus Resources

A screenshot of a configuration window titled 'datastar'. It contains several input fields and checkboxes. The 'Access Method' is set to 'globus'. The 'Group Name' is 'dslogin.sdsc.edu'. The 'Members' checkbox is checked, and the 'Round Robin' checkbox is also checked. The 'Gram Server' field is empty. The 'GridFtp Server' is 'dslogin.sdsc.edu:4657'. The 'Install Directory' is '/user/inca/installation'. The 'Proxy Server' is 'grid-devel1.rocksclusters.org'. The 'Proxy User ID' is 'inca'. The 'Proxy Password' is '*****'. The 'Proxy Lifetime' is set to '1440'. There are 'Cancel' and 'Ok' buttons at the bottom.

- Accessed by Reporter Agent via Globus CoG Java classes
- Reporter Manager staging via GridFtp
- Proxy used by Reporter Agent to launch Reporter Manager and potentially by Reporters

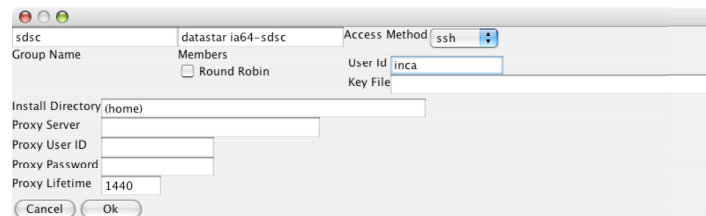
Using the Local Resource



The screenshot shows a configuration window titled 'IncaCentral'. The 'Access Method' is set to 'local'. The 'Group Name' is 'inca.sdsd.edu'. The 'Members' section is empty. The 'Install Directory' is '(home)'. The 'Proxy Server' is empty. The 'Proxy User ID' is empty. The 'Proxy Password' is empty. The 'Proxy Lifetime' is '1440'. There are 'Cancel' and 'Ok' buttons at the bottom.

- Allows running reporters on the same machine as the Reporter Agent
- Used by default installation

Grouping Resources



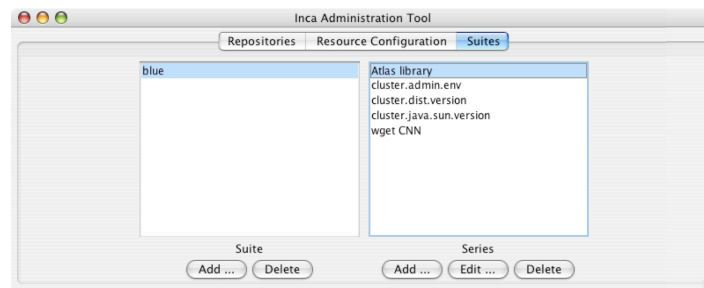
The screenshot shows a configuration window titled 'IncaCentral'. The 'Access Method' is set to 'ssh'. The 'Group Name' is 'sdsc'. The 'Members' section is empty. The 'Install Directory' is '(home)'. The 'Proxy Server' is empty. The 'Proxy User ID' is empty. The 'Proxy Password' is empty. The 'Proxy Lifetime' is '1440'. There are 'Cancel' and 'Ok' buttons at the bottom.

- Directory, proxy info, etc. like macros--most specific value is used for each host

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Suites Tab



- **Single/multiple series choice up to administrator**
- **Report series named after reporter or given “nickname”**

Report Series Editor

cluster.libraries.goto.version
cluster.math.atlas.version
 cluster.math.blas.unit.level1
 cluster.math.blas.unit.level2
 cluster.math.blas.unit.level3
 cluster.os.kernel.unit.tuning
 cluster.os.kernel.version
 cluster.os.softenv.unit.has_required
 cluster.os.suse.version
 cluster.rpms
 cluster.scheduler.mai.version

altix
 datastar
 ia64-ncsa
 ia64-sdsc
 ncsa
 sdsc
 teragrid

cc
 dir
 log 0
 Arguments

Reporter
 (Compiles and runs a C program to retrieve the atlas version from ATL_buildinfo)

Nickname Atlas library
 Exec String nice -9 @EXEC@
 Limit CPU (secs) Wall (secs) 180 Memory (MB)
 Run Every 1 hours Starting At 0 0 ***
 Comparator VersionComparator
 Acceptable Output >= 1.9.3
 Notification Email
 Cancel Ok

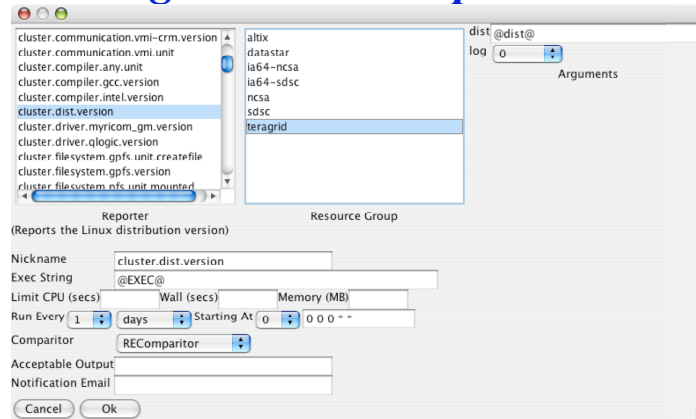
- Select reporter, resource group, and command-line argument values
- Argument list determined by reporter
- Reporter description appears below reporter

Report Series Editor (cont.)

Nickname Atlas library
 Exec String nice -9 @EXEC@
 Limit CPU (secs) Wall (secs) 180 Memory (MB)
 Run Every 1 hours Starting At 0 0 ***
 Comparator VersionComparator
 Acceptable Output >= 1.9.3
 Notification Email

- Nickname useful in later report display
- Exec String allows specialized execution
- Reporter killed and error report stored if limits exceeded
- Run frequency uses cron syntax
- Comparator takes action on unacceptable output

Using Macros in Report Series



- **@macro@** expanded for each host
- **Multi-valued macros expand to multiple report series**