



User-level Grid Functionality and Performance Monitoring

Inca detects Grid infrastructure problems by executing periodic, automated, user-level testing of Grid software and services.

Enables consistent user-level testing across resources:

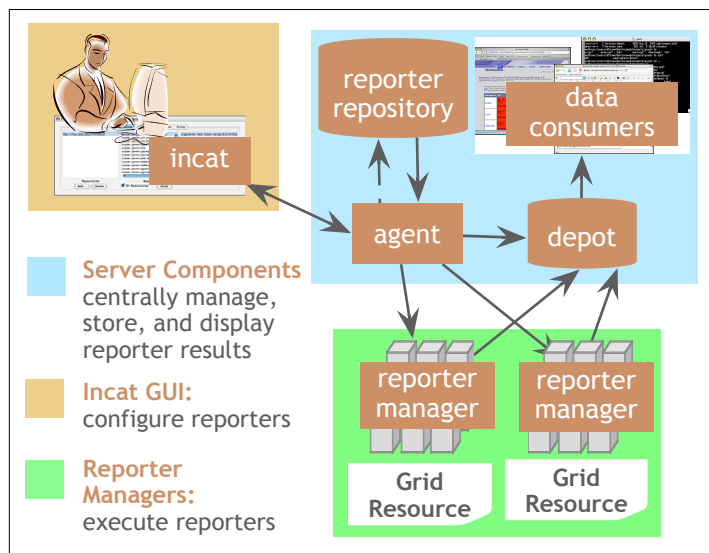
Emulates a Grid user by running under a standard user account and executing tests using a standard GSI credential. Ensures consistent testing across resources with centralized test configuration.

Easy to collect data from resources:

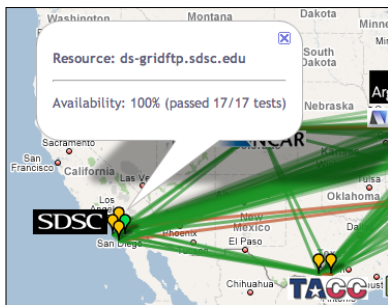
Data is collected by reporters, executables that measure some aspect of the system and output the result as XML. Multiple types of data can be collected. Perl APIs are provided to make it easy to write reporters; most are less than 30 lines of code.

Easy to configure and maintain:

Manages and collects a large number of results through a GUI interface (incat). Measures resource usage of tests and benchmarks to help Inca administrators balance data freshness with system impact.



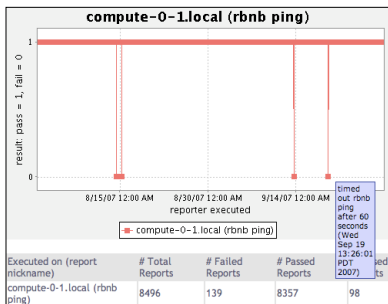
A standard Inca installation



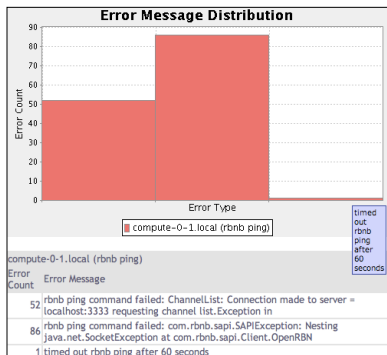
Cumulative test status by resource

gsi-openssh	anli-ia64	anli-viz	indiana-bigred	ncar-frost	nca-ab
version: >= 3.9	4.6p1	4.6p1	4.5p1	4.5p1	4.5p1
gsish-unit	pass	pass	pass	error	pass
gx-map	anli-ia64	anli-viz	indiana-bigred	ncar-frost	nca-ab
version: 0.5.3.3 0.5.3.2p1	0.5.3.2p1	0.5.3.2p1	0.5.3.2p1	0.5.3.2p1	0.5.3.2p1
myproxy	anli-ia64	anli-viz	indiana-bigred	ncar-frost	nca-ab
version: >= 3.4	3.4	3.4	3.4	3.4	3.4
softenv	anli-ia64	anli-viz	indiana-bigred	ncar-frost	nca-ab
version: 1.6.2	1.6.2	1.6.2	1.6.2	1.6.2	1.6.2
softenv-unit	pass	pass	pass	pass	pass
tgproxy	anli-ia64	anli-viz	indiana-bigred	ncar-frost	nca-ab
tgproxy-unit	pass	pass	pass	pass	pass

Test status by package and resource



Status history of a ping test



Distribution of ping error types

Comprehensive views of data:

Offers a variety of Grid data views from cumulative summaries to reporter execution details and result histories.

Archived results support troubleshooting:

Further understanding of Grid behavior by storing and archiving complete monitoring results. Allows system administrators to debug detected failures using archived execution details.

Secure:

Inca components communicate using SSL. Securely manages short-term proxies for Grid service testing.

For more information visit
<http://inca.sdsc.edu>

Inca is supported by:

