



Inferno Grid Software

In the competitive world of business, companies are becoming increasingly reliant on complex data processing and analysis as part of their product development. These tasks require vast amounts of computational power which, if using dedicated hardware, comes at great cost. The Inferno Grid System provides a low cost solution with several advantages:

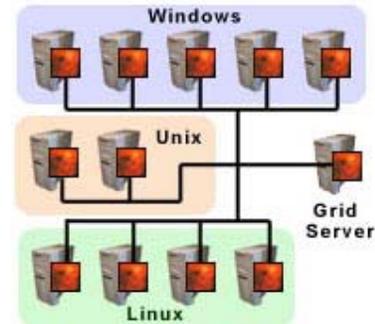
- **Increased performance** - Harness the unused power of existing machines to create a large compute resource without the expense of high performance hardware.
- **Improved research** - Perform complex modelling and data analysis faster and with greater accuracy. Speed up time to market by reducing the wait for critical results and improving throughput at the testing and development stage.

The Inferno Grid System minimises hassle as users can continue to use their existing applications without the need to modify or rewrite code. The Inferno Grid System can also control multiple jobs across several platforms without the need for different servers. Client capabilities ensure that platform specific jobs can only be executed on the correct platform.

Features

- **High Tolerance** - The Inferno Grid System is resilient to client, server and network failures ensuring that jobs are completed in the shortest possible time with minimal computation loss.
- **Highly Responsive** - Stop, start and prioritise jobs with immediate effect across the grid. Once changes have been made, individual clients will start on their new tasks within a matter of seconds.

No disruption to users - Processing for the grid takes place in the background using only unused resources. Users can carry on working as normal with no reduction in system performance or responsiveness.



Inferno Grid Software

Versatile

Run native applications on Windows, Linux and Unix or use Inferno applications for complete portability across platforms

Portable Server

The grid server runs on any platform which supports Inferno (Windows, Linux, Unix and more). The server does not need to be running on the same platform as the grid clients.

Small Footprint

Multi-platform client grid software takes up less than 10MB

Dynamic Groups

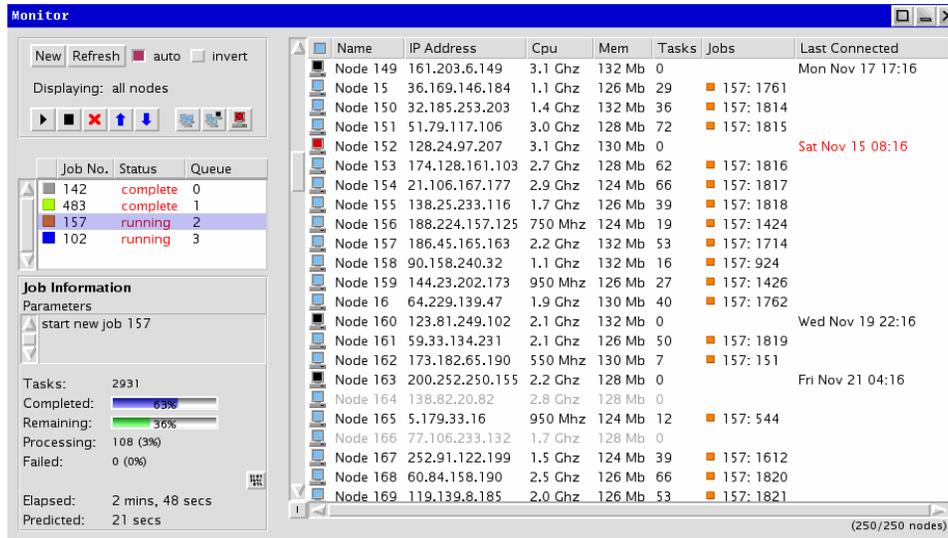
Restrict a job to a selected group of clients using include or exclude operators. Groups can be modified whilst a job is running with immediate effect.

Good Housekeeping

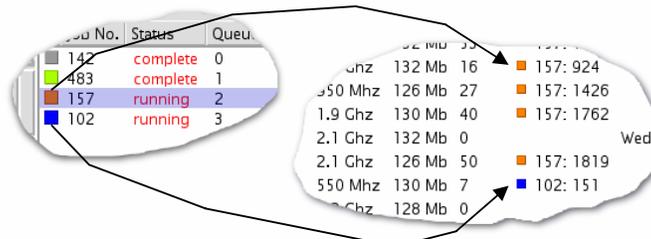
All temporary files are removed from the client on task completion or failure

Advanced administration and monitoring

The Inferno Grid System can be controlled remotely and securely from any machine on the network, giving complete freedom to grid administrators. A graphical interface is provided to allow users to control and monitor the status of jobs and clients within the grid. Being able to see the grid at a glance and sort on any client attribute enables users to quickly find non-working or under performing clients.



The graphical monitor/control interface uses colour coding to allow the user to quickly see the state of the grid:



Each job is assigned a colour which is then used in the client list to show which clients are running the job. The interface itself is made up of four main parts:

Control Frame

From here, the user can configure the view in the client list frame and perform the following operations:



- Start a job
- Stop a job
- Delete a job
- Raise/lower job priority
- Exclude/include a client

Job List

This frame displays a list of all the jobs in the grid along with the following information job:

Job No.	Status	Queue
142	complete	0
483	complete	1
157	running	2
102	running	3

- Unique job number
- Job status
- Queue position (the order in which jobs will be processed)
- Job colour

Job Information

More detailed information about the currently selected job is displayed in this frame:

Job Information	
Parameters	
start new job 157	
Tasks: 2931	
Completed:	63%
Remaining:	36%
Processing:	108 (3%)
Failed:	0 (0%)
Elapsed:	2 mins, 48 secs
Predicted:	21 secs

- Command used to start the job
- Total number of tasks (sub-jobs)
- Number of tasks:
 - Completed
 - Remaining
 - Processing
 - Failed
- Time elapsed since job was started
- Predicted time to completion (if known)

Client List

The final frame displays a list of all clients in the grid along with:

Name	IP Address	Cpu	Mem	Tasks	Jobs	Last Connected
Node 149	161.203.6.149	3.1 Ghz	132 Mb	0		Mon Nov 17 17:16
Node 15	36.169.146.184	1.1 Ghz	126 Mb	29	157: 1761	
Node 150	32.185.253.203	1.4 Ghz	132 Mb	36	157: 1814	
Node 151	51.79.117.106	3.0 Ghz	128 Mb	72	157: 1815	
Node 152	128.24.97.207	3.1 Ghz	130 Mb	0		Sat Nov 15 08:16

- Client name
- IP address
- Cpu speed
- Memory
- Total number of tasks completed
- Job (colour coded) and task number for all task currently being processed
- Connected status:
 -  Connected
 -  Disconnected
 -  Dead
- Last time client was connected (if not currently connected)

Your Requirements

Vita Nuova can tailor the Inferno grid software to your individual specification as well as providing help with onsite installation and training. Contact us for more information.

www.vitanuova.com/solutions/grid