

# “Xoreax” Incredibuild For Linux Release notes

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# Introduction

The goal of this document is to provide clear status for planned work, developed features and expose issues found during internal QA tests

## ***Package information***

- Package created by automatic “GNU Make” system and propriety build configuration
- Package as binary code is located on [https://github.com/dimakuzminov/incredibuild\\_deployment.git](https://github.com/dimakuzminov/incredibuild_deployment.git)
- Package structure
  - bin/ - all Incredibuild binary applications
  - web/ - Monitor scripts, sources and libraries
  - etc/ - system scripts that are used on “Helper” and “Initiator” machines
  - usr/ - system files for “Helper” and “Initiator” machines
  - Documentation/ - all relevant Documents for this project (including this document)
  - grid\_server\_domain.conf.[domain\_group\_name] this file list DNS of computers in grid domain (it is manually defined files). For more information please read “Linux\_Incredibuild\_deployment\_Instructions\_v1.0.doc”
  - linux.pem – ssh access internal key (defined by amazon site, but used in all our test systems)
  - “prepare\_incredibuild\_machine.sh” - script that install all relevant packages on helper/initiator machines. For more information please read “Linux\_Incredibuild\_deployment\_Instructions\_v1.1.doc”
  - “prepare\_coordinator\_machine.sh” - script that install all relevant packages on coordinator machine. For more information please read “Linux\_Incredibuild\_deployment\_Instructions\_v1.1.doc”
  - 3rd\_side/ - all scripts to install 3rd side applications for grid computation
  - obsolete/ - all scripts that were previously supported, some need to be removed and some need to be updated
- How to Install [APPENDIX A]

## Changes from 6.2.5

### Changes in Initiator GUI

- Each report is storing in separate folder with informative name

### Added Coordinator GUI

- Added Coordinator html monitor application
- Added JSON report containing list of Helper Machines and information about every Helper Machine: Connected, Busy, Hostname, Cores, Memory, Operating system, Model name, Version.
- Added another JSON report, containing list of Build Machines and list of Helper Machines for every Build Machine.
- Monitor application parses both reports and demonstrates information on html page.

Added command that requests version of GridServer, XgConsole and XgSubmit on every helper machine.

Fixed keep alive mechanizm between Coordinator and GridServer

Changed version structure in build, branch name added

## Known issues

- 1 Cannot see coordinator GUI if incredibuild package is not installed on same machine
  - 1.1 Fixed on master
- 2 Cannot run build on machine is machine is already used by other machine initiator
  - 2.1 Scheduled in work plan
- 3 Name overlapping in coordinator GUI (if name is too long)
  - 3.1 Known issue

## Scope

### ***Changes from version 6.2.5***

commit 229a11dd1e9a6e840d4a7c0efafbac661b8f1132

Change version structure in build, add branch name

commit e5408ba8f9efa9385bf3a7dd0382202c8be7d872

Fix XgConsole print version bug: previously conflicted with design

commit 9587e088b2ed810a9862b544df27cf7560170505

Fix keep alive between Coordinator and GridServer

commit 92ff54e792c4e18e22080858f02dbb38dd1999e7

Fixed GridCoordinator Web UI page

commit 3541a90de0aed190401206dce7e86369dc2823f0

Fixed GridCoordinator GUI; Added command, that requested version of GridServer, XgConsole and XgSubmit on every helper machine

commit d0c1fd9843e04656bed27aa70c24ff778e562d78

Added another GridCoordinator JSON report, containing list of build machines and list of helper machines for every build machine

commit d8590016f3eae133dfb7258748a3da4206d6ee86

Added GridCoordinator JSON report and Web UI for it

commit e240694842868d3a826ba1b6d5901433be731da1

remove web obsolete files

commit f3349b8c74025968b248b811bfe6b49c9b4db6ed

Adding coordinator HTML monitor application

commit 88dabe66ec6b4346d75a47171de20a7dcb6bf641

change build monitor location

remove obsolete files

commit 4d213f2230aa27f4a119cbe850dac9a0d999b38f

Path to libraries was changed to explicit

commit 0542751883ffc08832e7330f0542fbb3df21c819

Changes in GUI: Each report is storing in separate folder with informative name

commit ecba81af6f9f1d40ca94fc97640fe6fd590b9b92

Move ProcessA and ProcessB to utilities and disable its build

commit a020353b9aa8993171d9ff2606b44f69faaba0c1

Fix logic for machine reusage, change all numbers to defines in code

commit b5a504c7888237d8a4ad852511a2901e5dcadf56

Add initialization of all variable in GridServer::SessionParams class

## Tests

### Test Initiator GUI.

#### Test – 0001 Test Initiator GUI

- Run build of some solution, MySQL for example.
- Open GridServer Web UI page

[http://\[coordinator\\_machine\\_name\]/incredibuild/build\\_monitor/](http://[coordinator_machine_name]/incredibuild/build_monitor/).

- Select a folder with the name formed from your build time and path, then select `show_build_process.html`.
- Expected result:
  - Dynamic diagram of your build should appear.
- Actual result:
  - Dynamic diagram of the build appears.

### Test Coordinator GUI.

#### Test – 0001 Test List of Helper Machines in Coordinator GUI

- Install Helper Machine in domain.
- Sure that it installed successfully.
- Open Coordinator Web UI page

[http://\[coordinator\\_machine\\_name\]/incredibuild/coordinator/default.html](http://[coordinator_machine_name]/incredibuild/coordinator/default.html).

- Expected result:
  - Helper machine should appear in List of Helper Machines
- Actual result:

Helper machine appears in List of Helper Machines

#### Test – 0002 Test List of Build Machines in Coordinator GUI

- Run build of some solution, MySQL for example.
- Open Coordinator Web UI page

[http://\[coordinator\\_machine\\_name\]/incredibuild/coordinator/default.html](http://[coordinator_machine_name]/incredibuild/coordinator/default.html).

- Expected result:
  - Initiator machine with its list of helper machines should appear in List of Build Machines.
  - Busy status of each machine should change from 0 to 1.
- Actual result:
  - Initiator machine with its list of helper machines appears in List of Build Machines.
  - Busy status of each machine changes from 0 to 1.



## **Test – 0003 Test end of build in Coordinator GUI**

- Run build of some solution, MySQL for example.
- Check on Coordinator Web UI page, which Helper Machines take part in this build.
- Wait until build is finished.
- Open Coordinator Web UI page again.
- Expected result:
  - Initiator machine with its list of Helper Machines should disappear from List of Build Machines.
  - Busy status of each Helper Machine that took part should change from 1 to 0.
- Actual result:
  - Initiator machine with its list of Helper Machines disappears from List of Build Machines.
  - Busy status of each machine changed from 1 to 0.

## **Test New command of Coordinator.**

### **Test – 0001 Test command that requests version of GridServer, XgConsole and XgSubmit on every helper machine**

- Install Coordinator
- Register a few Helper Machines
- Open Coordinator Web UI page.
- Expected result:
  - Each Helper Machine should have version of installed package in last column.
- Actual result:
  - Each Helper Machine has version of installed package in last column.

## Comparison table

launcher	MySQL		Samba		Linux		ACE	
Version 5.0 Xoreax 7 machines 46 slots( new scheduler): 31, 35, 33, 34, 36, 37, 1	real	4m22.500s	real	6m12.928s	real	1m44.109s	Not tested	
	user	0m41.107s	user	2m2.316s	user	0m26.082s		
	sys	0m20.929s	sys	1m10.260s	sys	0m13.113s		
Version 6.1.10 Xoreax 4 machines 22 slots 1, 31, 36, 34	real	3m26.288s	real	5m41.678s	real	2m8.966s	Not tested	
	user	0m13.429s	user	2m1.692s	user	0m24.242s		
	sys	0m15.969s	sys	1m11.208s	sys	0m12.929s		
Version 6.2 Xoreax 5 machines 24 slots, with exclude parameters 1, 31, 36, 34, 22	real	5m0.331s	real	6m18.315s	real	2m11.259s	real	11m24.161s
	user	0m13.765s	user	2m1.364s	user	0m24.714s	user	0m51.555s
	sys	0m15.017s	sys	1m9.716s	sys	0m13.057s	sys	0m16.237s
Version 6.2 Xoreax 5 machines 24 slots, no exclude parameters 1, 31, 36, 34, 22	real	6m4.498s	real	5m57.601s	real	2m12.171s	real	3m15.262s
	user	0m14.129s	user	2m1.168s			user	0m54.847s
	sys	0m16.377s	sys	1m9.844s	user	0m24.198s	sys	0m23.201s
					sys	0m11.985s		
Local machine	real	15m58.856s	real	8m6.840s	real	5m35.349s	real	9m51.807s
	user	28m48.472s	user	12m10.114s	user	9m29.756s	user	17m14.809s
	sys	1m38.446s	sys	2m48.623s	sys	0m53.447s	sys	1m30.682s

- **Build on local machine only ( 2 cores ) is running with option -j 4.**
  - **Local machine cannot be used for anything else and working at over capacity.**
  - **It is maximal speed that could be achieved**
- **When using XgConsole, there is restriction don't run more than number of cores on each machine and of course all process are running with low priority**
- **For builds 6.2 ND 6.1.10, small number of machines is used.**
  - **Need to rerun tests with 7 machines at least and 46 slots**

## APPENDIX A

### PACKAGE UPDATE

1. please run following commands each time you know there are updates in deployment package
  - 1.1 “cd incredibuild\_deployment”
  - 1.2 “git pull”
  - 1.3 “git checkout v6.4.1\_irina”
    - 1.3.1 if new files, please run following command:
      - 1.3.1.1 coordinator: ./prepare\_coordinator\_machine.sh
        - 1.3.1.1.1 optional can provided predefined “grid\_domain\_server.conf” file as argument
      - 1.3.1.2 initiator/helper machine: ./prepare\_incredibuild\_machine.sh coordinator\_machine\_name/ip\_address
        - 1.3.1.2.1 must specify coordinator\_machine\_DNS\_name to run the script
    - 1.3.2 to remove coordinator package from current machine:
      - 1.3.2.1 ./remove\_coordinator\_package.sh
    - 1.3.3 to remove incredibuild package from current machine:
      - 1.3.3.1 ./remove\_incredibuild\_package.sh

### *First time installation*

#### Install coordinator machine in domain

We need to use Terminal application for this process;

- 1 Open terminal
- 2 write following command to download package from public git repository
  - 2.1 “sudo apt-get install git”
  - 2.2 “git clone [https://github.com/dimakuzminov/incredibuild\\_deployment](https://github.com/dimakuzminov/incredibuild_deployment)”
- 3 install generic package
  - 3.1 “cd incredibuild\_deployment”
  - 3.2 “git pull”
  - 3.3 “git checkout v6.4.1\_irina”
  - 3.4 “./prepare\_coordinator\_machine.sh [grid\_server\_domain.conf.[generic\_ubuntu]]”
    - 3.4.1 grid\_server\_domain.conf.generic\_ubuntu could be replaced with any other grid\_server\_domain.conf.[profile] file
    - 3.4.2 grid\_server\_domain.conf file argument could be ignored

## Install build machine in domain

**It is recommended to install machine, only after coordinator is installed in network and is accessible from current machine**

We need to use Terminal application for this process;

- 4 Open terminal
- 5 write following command to download package from public git repository
  - 5.1 “sudo apt-get install git”
  - 5.2 “git clone [https://github.com/dimakuzminov/incredibuild\\_deployment](https://github.com/dimakuzminov/incredibuild_deployment)”
- 6 install generic package
  - 6.1 “cd incredibuild\_deployment”
  - 6.2 “git pull”
  - 6.3 “git checkout v6.4.1\_irina”
  - 6.4 “./prepare\_incredibuild\_machine.sh coordinator\_machine\_DNS\_name”
    - 6.4.1 must specify coordinator\_machine\_DNS\_name