gLite WN running as a Windows service

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Grid extension problem

- Hard to install and maintain the Middleware
- Special operating system (SL 4.5) is required
- Updates are problematic on large scale
- Experties is needed to provide resources
- Only dedicated resources can be connected

Proposed solution

- **Running Grid in Virtual Machine**

Feasabilty

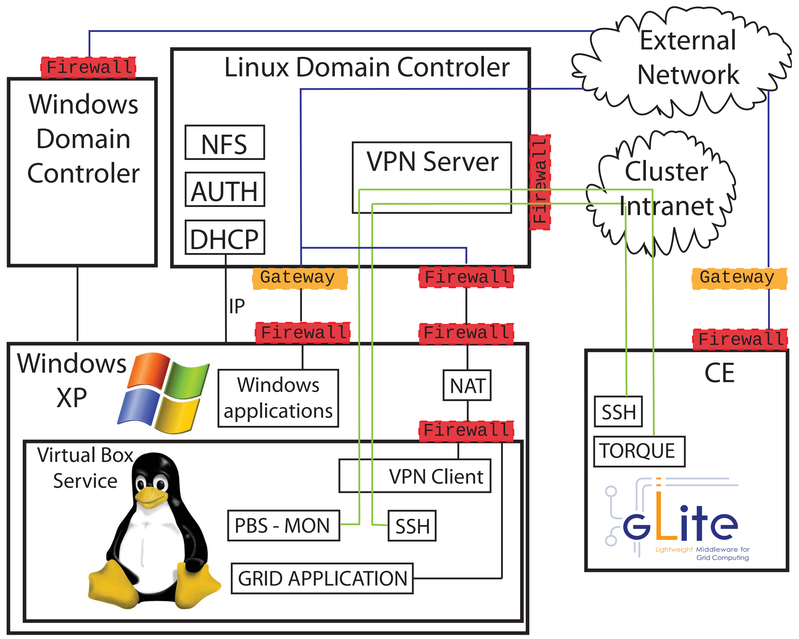
Computer market share

~ 90% Windows
~ 5% Linux
~ 5% Other

	Desktop grids	Utility grids
Example	SETI@home	EGEE
Resources	>10.000.000	<100.000
Compexity	minimal	dedicated environment
Usability	special tasks	generic resources

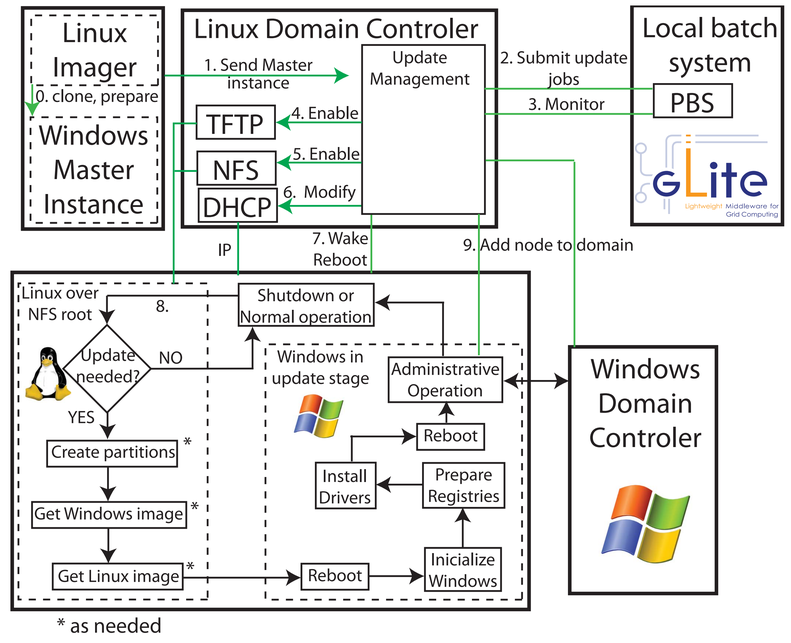
gLite WN runnig as a Windows service

- Windows isolated from Grid
  - OS level: VirtualBox
  - Network level: NAT, VPN
- CE - WN network connection through VPN
  - no NAT, firewall, proxy, router problems



System upgrade

- Automatic (both Windows and Linux)
- Update procedure is Linux based (scriptable)
- Compatible with local resource manager (PBS)
- No grid job is lost

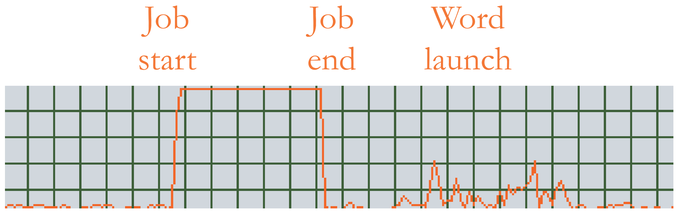


Benefits/Drawbacks

+ Native OS independent Grid
+ Desktop computer power can be used
+ Easy to install and manage
+ Native OS separated from Grid
+ Automatic large-scale update (computer room)
+ No performace drop on native OS
- Security issues
- Memory must be divided

Performace

+ Windows is not slowed down (priority settings)
+ Performance of WN is the same as in native environment (if Windows is idle)



Benefits/Problems

- Windows domain security problems
- Works only with corporate Windows licence
+ Differnt hardware support (drivers)
+ Uniform or sepecial Windows installations
+ Waits for Grid job to be finished

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