



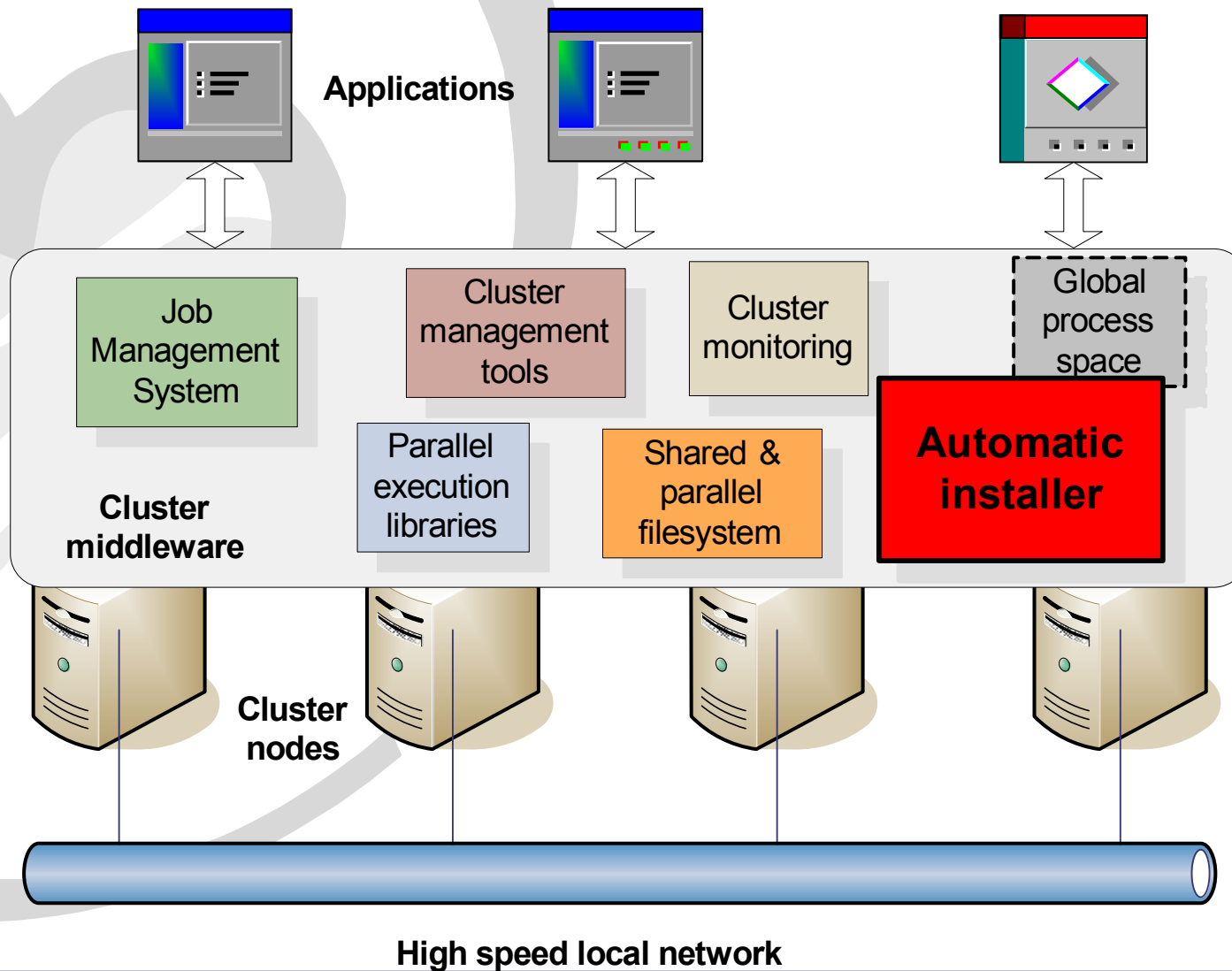
Automatic Installers Review

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Overview

- Introduction
- Automatic Installer
- Images vs. Packages Based
- Automatic Installers overview
- Experience
- Conclusion

Introduction



Automatic Installer

- Automatic Installer
 - Software & OS installation on remote computers
 - Software stack is held on server computer
 - Remote computers (nodes) use PXE for initial boot
 - Linux OS
- Issues
 - Image vs. package based installation
 - Distribution (OS) independency
 - Dynamic software update

Automatic Installer

- usage -

- Cluster nodes installation
- Administration of large systems:
 - Computer laboratories
 - Classrooms
 - Company & institute desktops
- Grid sites installation

Images vs. Packages

	Pro	Con
Image	<ul style="list-style-type: none">• More intuitive• Easy software addition• OS independent	<ul style="list-style-type: none">• Large amount of space for different configurations
Package	<ul style="list-style-type: none">• Definition of different configurations is easy• Easy software update	<ul style="list-style-type: none">• New software demands package creation• Depends on packaging type• Package dependencies

Automatic Installers Overview

- package based -

- LUI (Linux Utility for Cluster Installation)
 - IBM Linux Technology Centre
 - RPM packages
 - Complex software installation description
 - Lacks RPM dependency checks
- RedHat Kickstart
 - RedHat automatic installation mechanism
 - RPM packages
 - No special tool for node booting (PXE and tftp have to be manually configured)
 - Rocks cluster distribution

Automatic Installers Overview

- package based -

- FAI (Fully Automatic Installer)
 - Debian packages (uses apt-get)
- LCFG (Local Configuration System)
 - RPM packages
 - Provides services on nodes to enable dynamic software update
 - Provides web portal interface
 - Complex software installation description
 - European DataGrid Grid system

Automatic Installers Overview

- image based -

- SystemImager
 - Pure image based
 - Image is pulled from manually installed node (*golden client*)
- System Installation Suite
 - LUI + System Installation Suite
 - RPM based packages for image creation
 - SystemImager for node installation
 - OSCAR cluster distribution

Experiences

- FAI & SystemImager
 - for Debian cluster distribution creation
 - SystemImager is easier to install
 - SystemImager demands a lot of HD space on server
- RedHat Kickstart
 - As a part of Rocks cluster distribution
 - Isabella cluster
 - CRO-GRID Infrastructure clusters

Experiences (cont.)

- System Installation Suite
 - As a part of OSCAR cluster distribution
 - Easy to install and use
 - CRO-GRID Infrastructure clusters
- LCFG
 - As a part of EDG system
 - Hard to install (complex resource description, lack of documentation)
 - Dynamic software update & web interface are useful
 - EDG site at Srce

Conclusion

- OS dependent:
 - Kickstart for RedHat systems
 - FAI for Debian systems
 - SIS for RPM based systems (RedHat, Mandrake)
- OS independent – SystemImager
- Clusters:
 - Image based are better