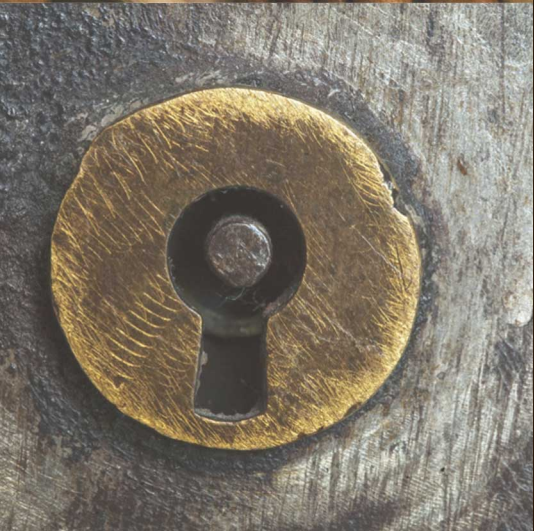




Rudder

Configuration Management benefits for everyone



Rudder Who am I ?

- Nicolas CHARLES

- **Job** : Co-founder and CEO of Normation
- **Trade** :
 - Have a developer background (Scala)
 - Came to system administration in 2009 with CFEngine 3
 - One of the developers of Rudder
 - Love to code (still more a Dev than an Ops)
- **Open Source** : CFEngine Community Champion



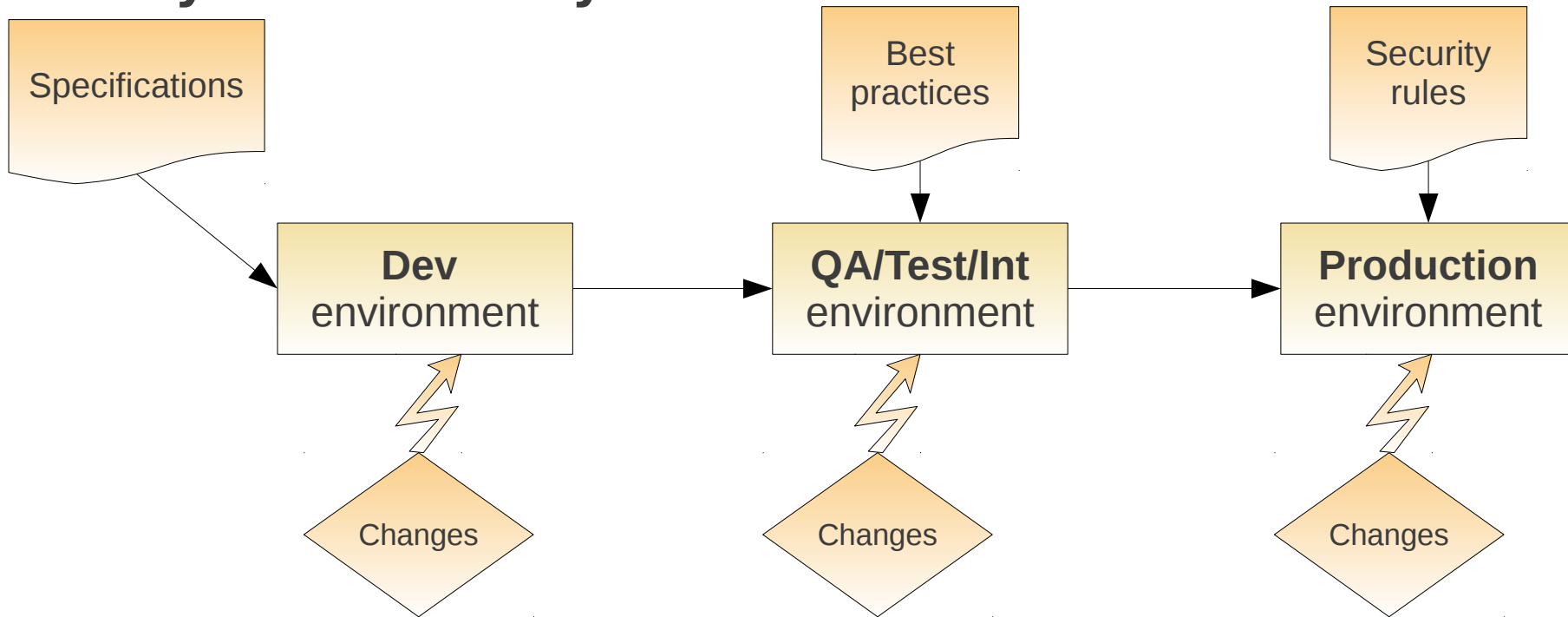
Contacts

Mail : nch@normation.com

Twitter : [@nico_charles](https://twitter.com/nico_charles)



Lifecycle of an IT system



Issues

*From 1 service to...
10, 100, 1000 !*

Disaster recovery

Prove compliance



Rudder The three waves of Configuration

1. Craft



Hand made configuration,
tailored to fit



- Adaptive to all needs
- Customized solution
- Detail oriented



- Scalability issue
- Repetition is not a human quality
- Knowledge sharing

2. Duplication



An « ideal » installation,
reproduced identically



- Save time, from the second deployment
- Identical environments



- Parameters adaptation
- Change management
- Compatibility of image formats

3. Central management



Automated configuration,
managed from a central
point



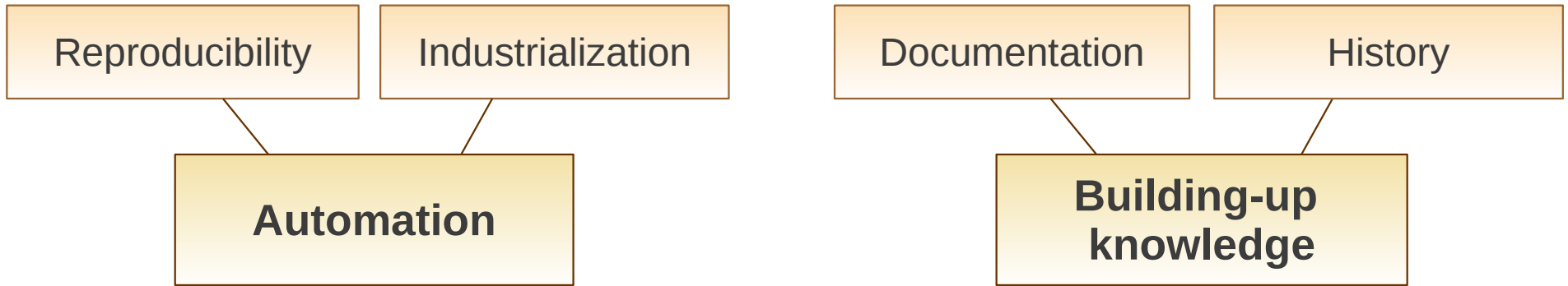
- Centralized control
- Change management
- Validation and reporting
- Knowledge sharing



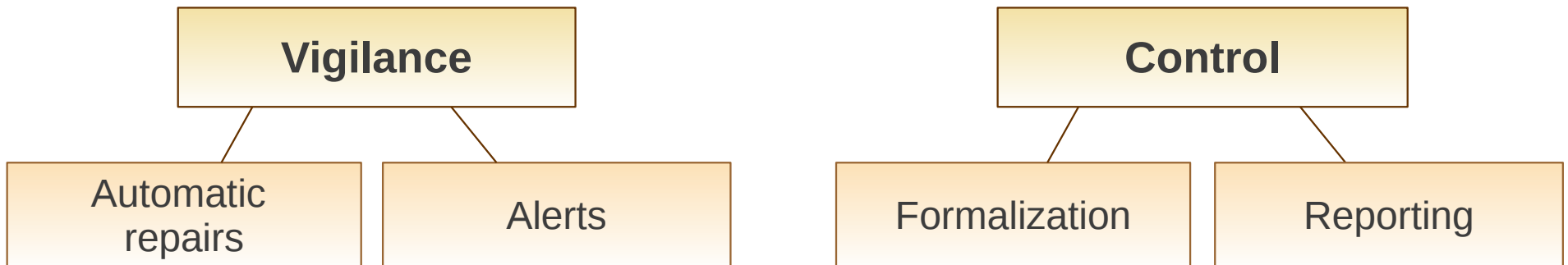
- Agent on each server
- Learning curve
- Increased complexity of ops

EVOLUTION





Configuration management





A lot of common points



Same origins



Specifically designed for configuration management



Client-server model (sometimes optional)



Command Line Interface



Stepped learning curve



Manual or non integrated reporting

Rudder

Make configuration management easy
and increase its adoption

Lower entry cost
to
learn and use
configuration
management

Extend **benefits**
of
configuration
management
to
a **wider population**

Easy to use

Highly powerful

Managers

Junior
sysadmins

Non
experts



Rudder



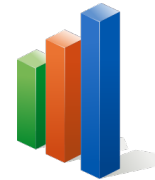
Specifically designed for configuration management



Simplified user experience



Based on CFEngine, standard since 1993



Graphical reporting



Automatic inventory (hardware and software)



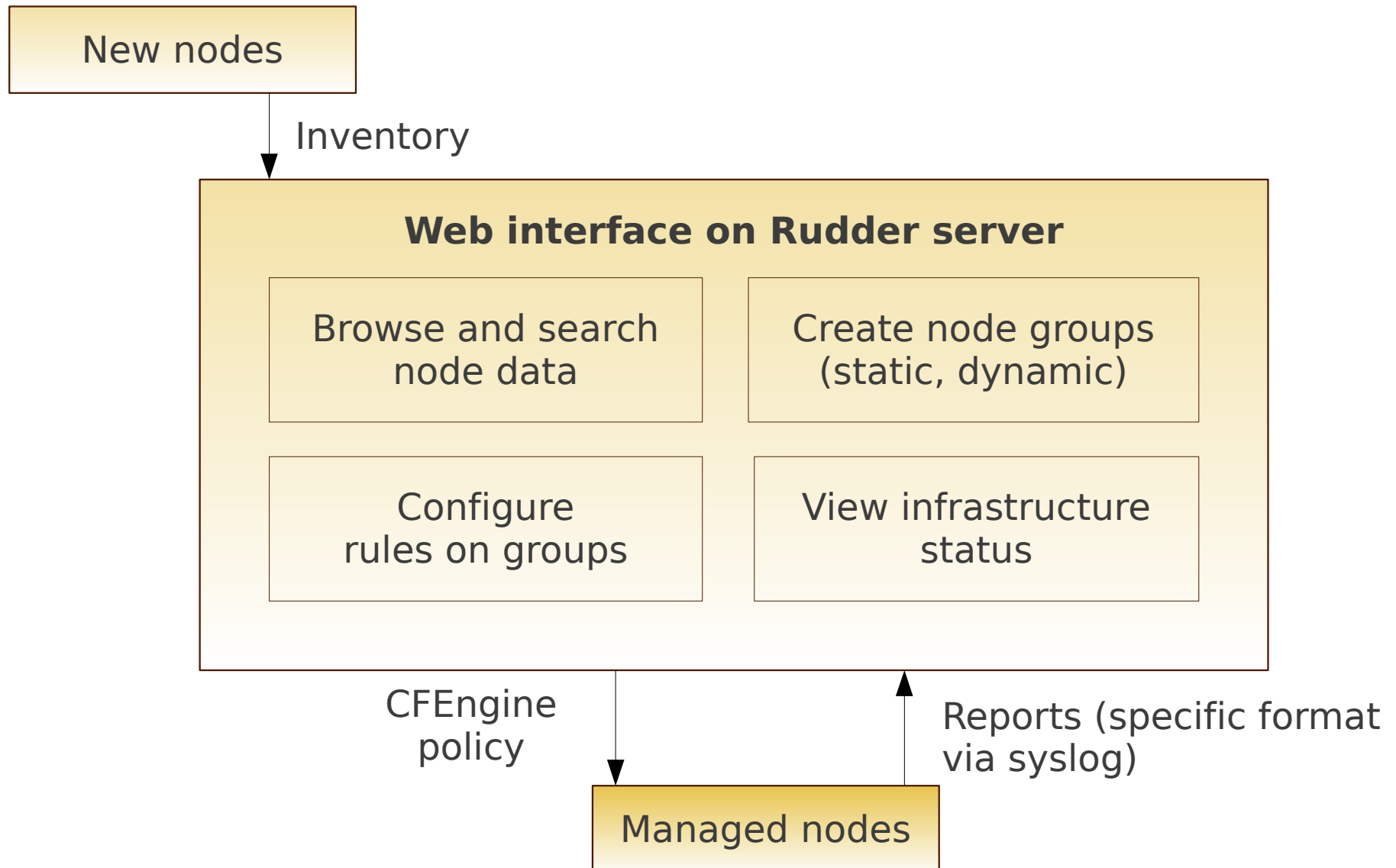
Best practices library included



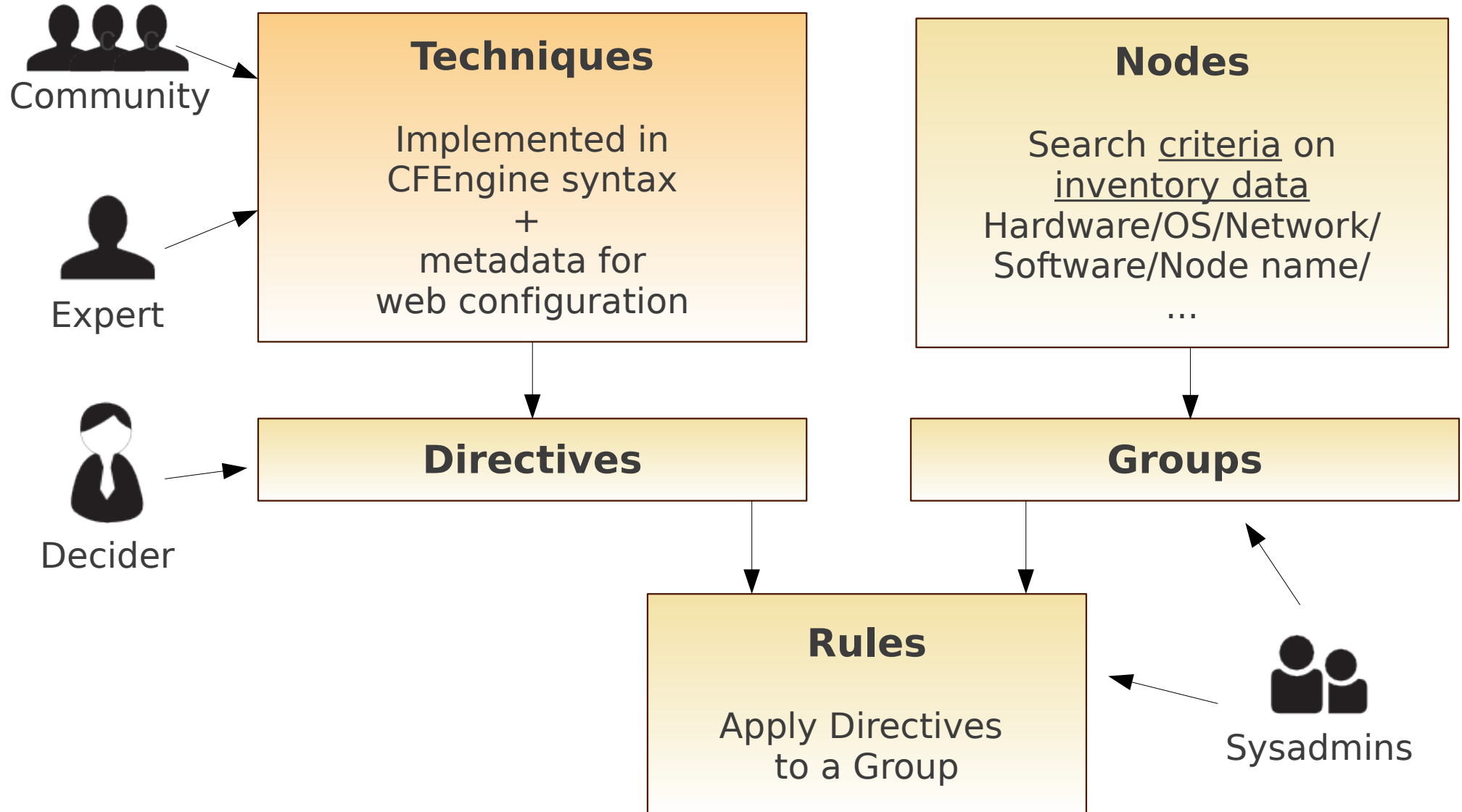
Multi-platform (packaged for each OS)



Open Source




Rudder Workflow



Rudder Web Interface overview

Welcome, [jon.doe](#) | [Log out](#)


 **Rudder**
Drift assessment

✓ Success: configuration rules applied at 2011-10-13 16:05 (took 14s)
[Regenerate now](#)

Home **Asset Management** **Configuration Management** **Administration**


Welcome to Rudder

Description

 Rudder allows you to manage your IT infrastructure by making an inventory of your nodes, and applying configuration rules to them.
A configuration rule is the application of a configured policy template to a node group.


- There are no pending nodes
- There are [6 accepted nodes](#)
- There are [2 configuration rules applied](#)

Rudder Asset Manager




- [Accept or refuse](#) new nodes in Rudder
- [List or search](#) your nodes' inventories in Rudder
- [Define node groups](#) from search results

Rudder Configuration Manager




- Build your own [policy template library](#) and [create and configure instances of policies](#)
- List, register and manage [configuration rules](#) on your nodes from available [policies](#)
- Manage and supervise states from these configuration rules

Rudder Support Desk



- [Report and follow bugs](#), [join the Rudder community!](#)
- [Professional Services](#) and [plugins for your organization](#)

Rudder Administration



- Track all events that have occurred: [Event logs](#)
- [Configure the Rudder server](#)



View a node

Quick node search: start typing a hostname or Rudder ID here:

- Node summary
- Hardware
- File systems
- Network interfaces
- Software
- Reports
- Technical logs

Groups containing this node

- Root of the group and group categories
 - RedHat-like
 - SuSE: dynamic

Node characteristics

General

Hostname: sles-11-sp1-64
Machine type: Virtual machine (QEMU/KVM)
Total physical memory (RAM): 998 MB
Total swap space: 745 MB

Operating system details

Operating System: SUSE Linux Enterprise Server 11 (x86_64)
Operating System Type: Linux
Operating System Name: SuSE
Operating System Version: 11
Operating System Service Pack: 1

Rudder information

Agent name: Community
Rudder ID: 988b95b2-f77b-4453-9787-e8461f69bad8
Date inventory last received: 2011-10-18 00:45
Date first accepted in Rudder: 2011-10-13 11:45

Accounts

Administrator account: root
Local account(s): None

Rudder Web Interface overview

Directive Management

Configure the Directives based on [Active Techniques](#).

Library	Usage
<p><input type="text" value="Search"/></p> <ul style="list-style-type: none">Root of active techniques's library<ul style="list-style-type: none">Application management<ul style="list-style-type: none">APT package manager configurationApache 2 HTTP serverOpenVPN clientPackage management for Debian / Ubuntu / APT systemsPackage management for RHEL / CentOS / SuSE / RPM systemsRUG / YaST package manager configuration (ZMD)Zypper package manager configurationDistributing files<ul style="list-style-type: none">Download a fileDownload a file from the shared folderEnforce a file contentFile state configuration<ul style="list-style-type: none">Security configuration<ul style="list-style-type: none">Set the permissions of filesManage files and foldersJob scheduling<ul style="list-style-type: none">Job schedulerSystem settings<ul style="list-style-type: none">Miscellaneous	<p>Directives are displayed in the tree of Active Techniques, grouped by categories.</p> <ul style="list-style-type: none">Fold/unfold category folders;Click on the name of a <i>Technique</i> to see its description;Click on the name of a <i>Directive</i> to see its configuration items. Details of the <i>Technique</i> it's based on will also be displayed. Additional <i>Techniques</i> may be available through the Techniques screen.



Section: Authentication settings

Allow challenge-response authentication (e.g. via PAM): Yes
 No
 Don't change

Allow password authentication: Yes
 No
 Don't change

Allow public key authentication: Yes
 No
 Don't change

Allow empty passwords for password authentication: Yes
 No
 Don't change

Allow root to login using SSH: Yes (Unconditional) ▼

Maximum authentication attempts per connection: 6

Time before disconnect if not logged in (seconds): 120

List of configuration rules

Add a new rule

Name	Description	Status	Deployment status	Compliance	Policy instance	Target node group
Danger MOTD		Enabled	In application	Applying	Warning MOTD	Recent OS
Name resolution		Enabled	In application	100%	Name resolution 1, ...	SingleOS
Some Users		Enabled	In application	75%	Basic Users	Without SLES
SSH everywhere		Enabled	In application	16%	SSH prod	AllLinux
SSH srv prod		Enabled	In application	100%	SSH prod	All debian
Users and Fstabs CR	Test CR	Enabled	In application	100%	Fstab on Public Share, ...	SingleOS

List of nodes having the Users and Fstab Not for SLES configuration rule

Status reported for this configuration rule on last execution (if in the last 15 minutes): Users and Fstab Not for SLES

Node name	Severity
centos-5-32	No answer
centos-6-64	Repaired
debian-5-32.labo.normation.com	Success
debian-6-64.labo.normation.com	Success

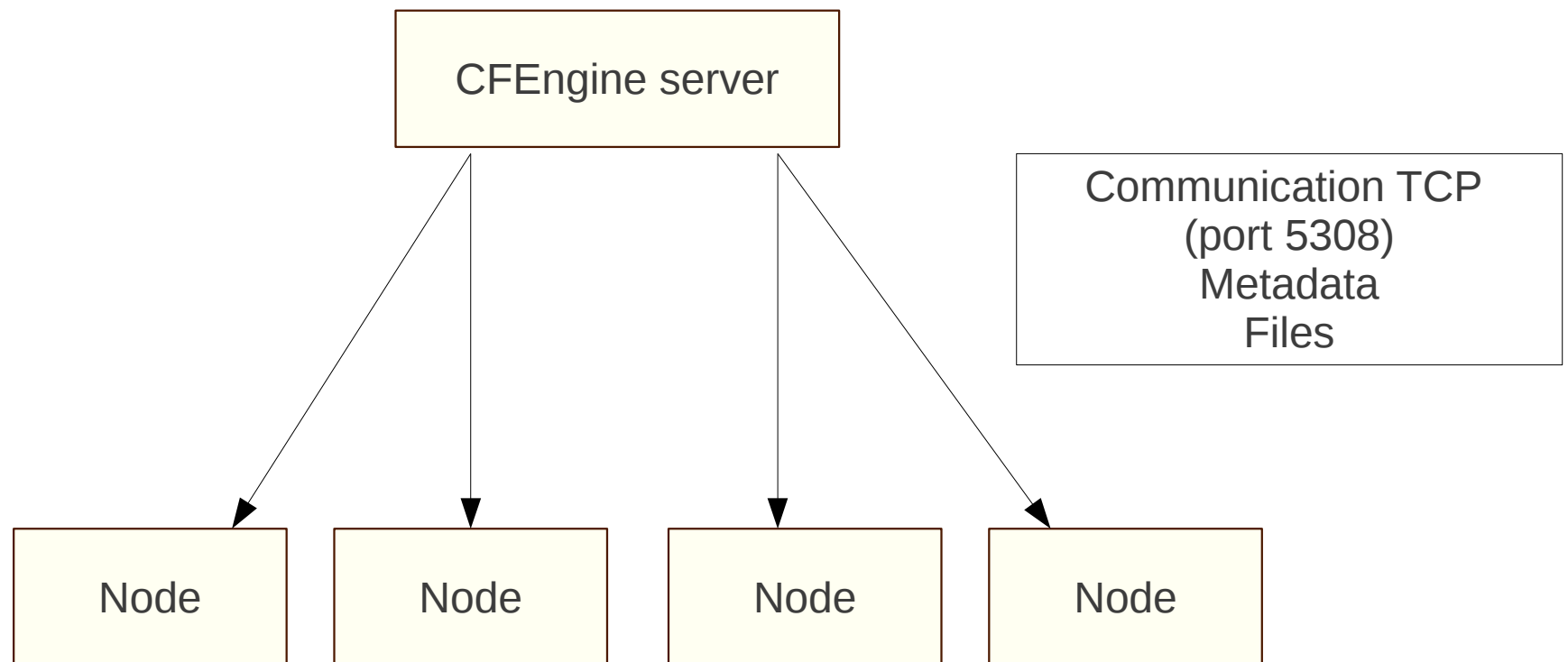
First Previous 1 Next Last

Showing 1 to 4 of 4 entries

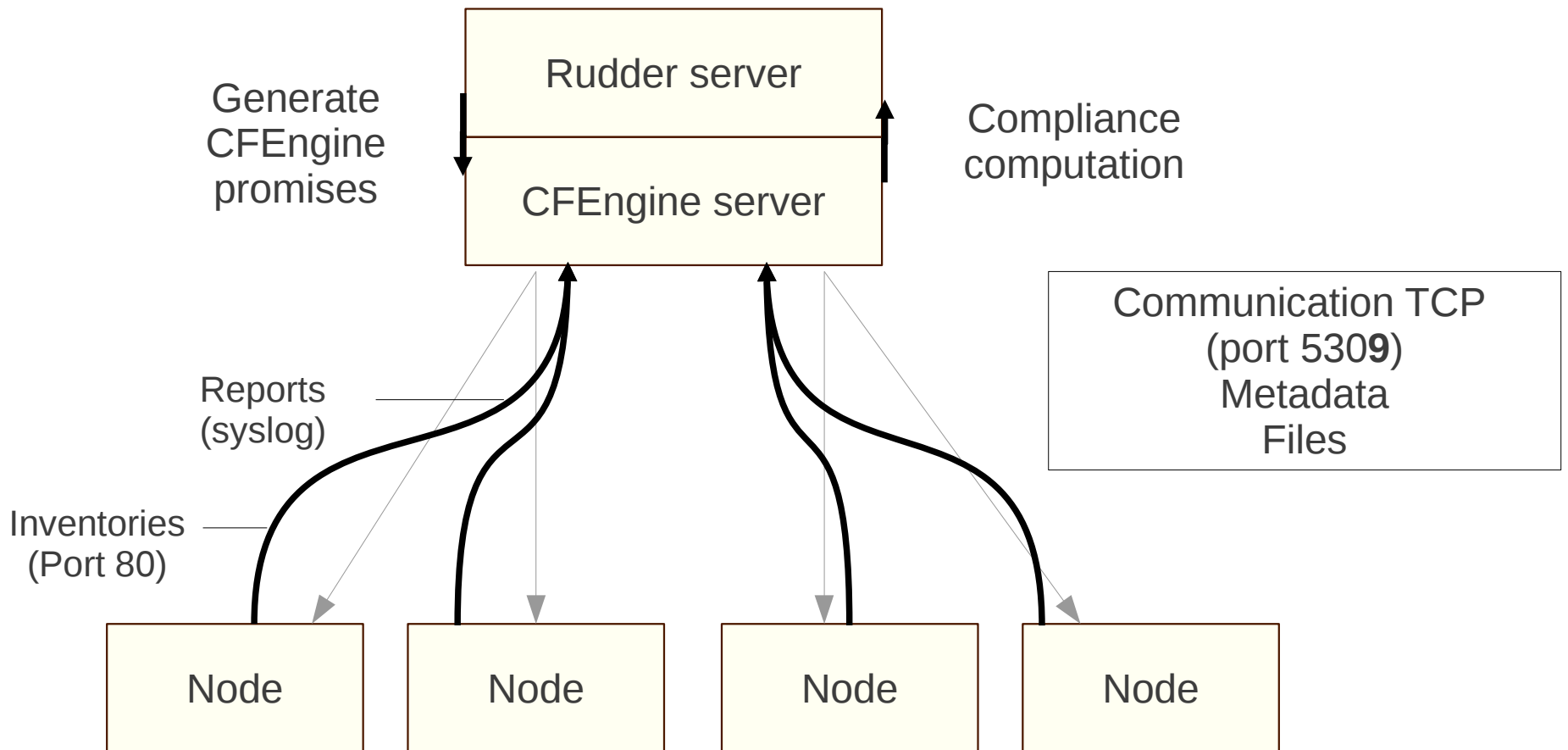
Close



Typical CFEngine architecture



Rudder architecture, on top of CFEngine



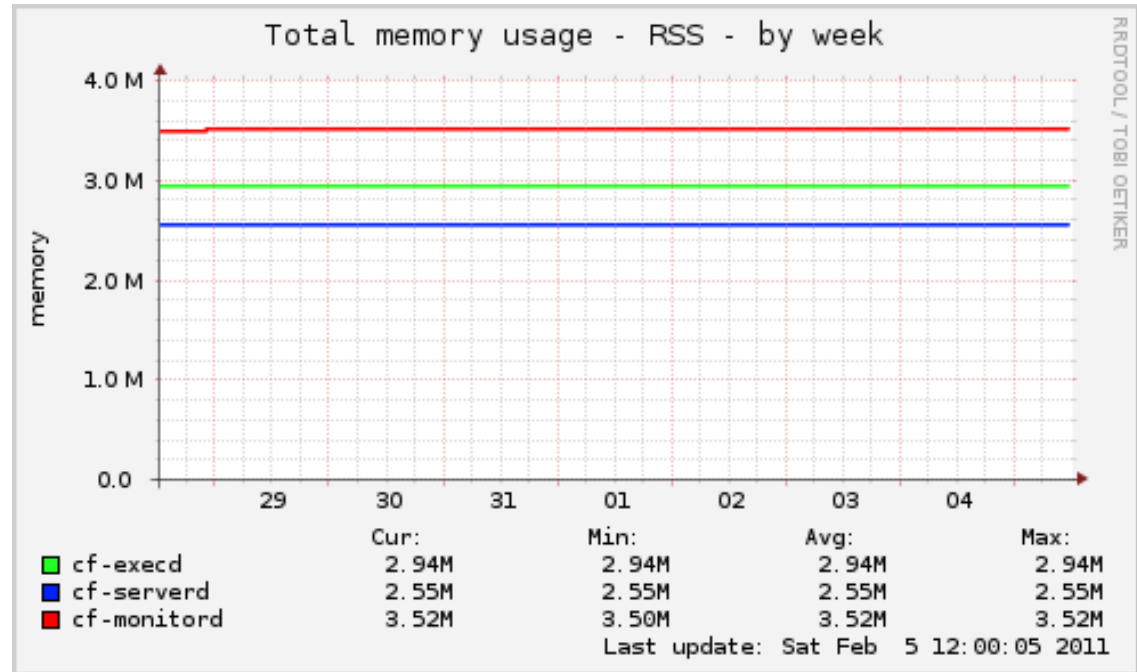
Rudder Requirements (on the Node)

Small amount of RAM

Some dependencies

- OpenSSL*
- BerkeleyDB*
- PCRE*
- Syslog

* shipped within rudder-agent package



Memory occupation of CFEngine daemons



Rudder The Open Source project

- Created in 2009
 - October 2011 : First public release
 - August 2012 : Second major release (2.4)
- Main technologies
 - CFEngine, Scala, OpenLDAP, FusionInventory
- Community
 - Full time developers: **8** (at Normation)
 - Official contributors : **6**
 - Other members : **~10**
- Key links :
 - Community website : <http://www.rudder-project.org>
 - Source code : <http://github.com/Normation/>
 - Mailing-list : rudder-users@lists.rudder-project.org
 - IRC : **#rudder** on Freenode
 - Twitter : **@RudderProject**



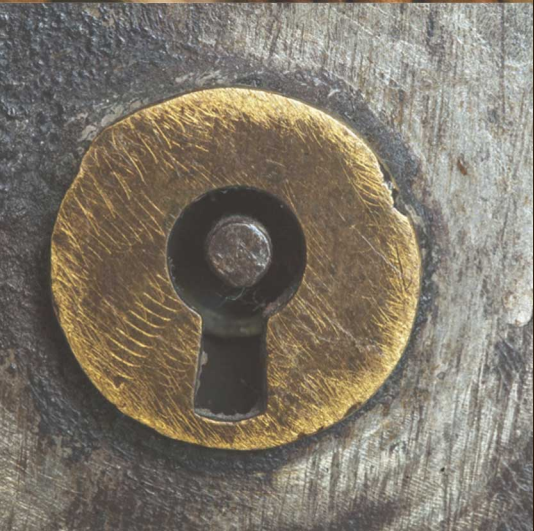


Rudder 

FroSCon
Free and Open Source Software Conference



Demo



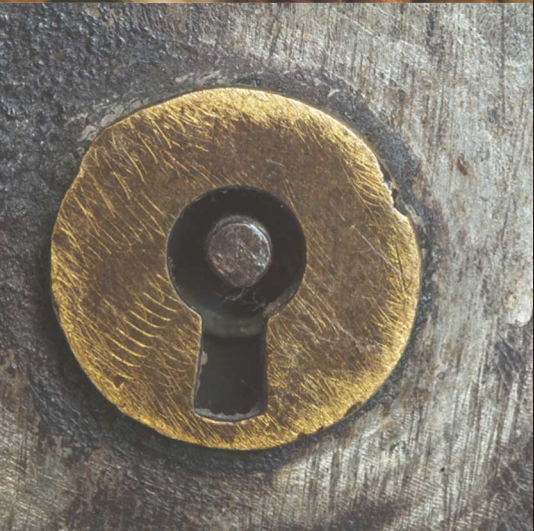


Rudder 

FroSCon
Free and Open Source Software Conference



Questions ?



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