

Configurations: Do you prove yours ?

Continuous configuration, observability, compliance

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How are the servers doing?



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No error nor change in logs means success?

Aren't we missing something?

Main challenges faced nowadays



Multiple teams, diluted expertise, harder reporting



MGMT



DEV



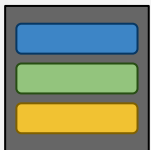
SEC



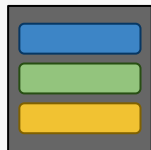
OPS



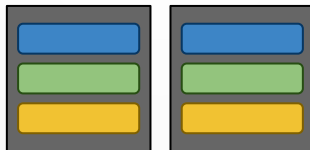
EXTERN



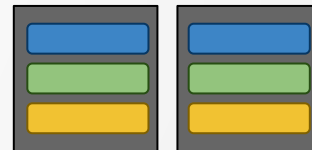
DEV



QA



PRODUCTION



RECOVERY

Heterogeneous systems, reduced visibility, ease of use and understanding

Getting and understanding the info is complex



Operators, Managers, Experts, APIs **have different needs**

Frustration if we **need a third party** to get data

We **mistrust** what we don't understand



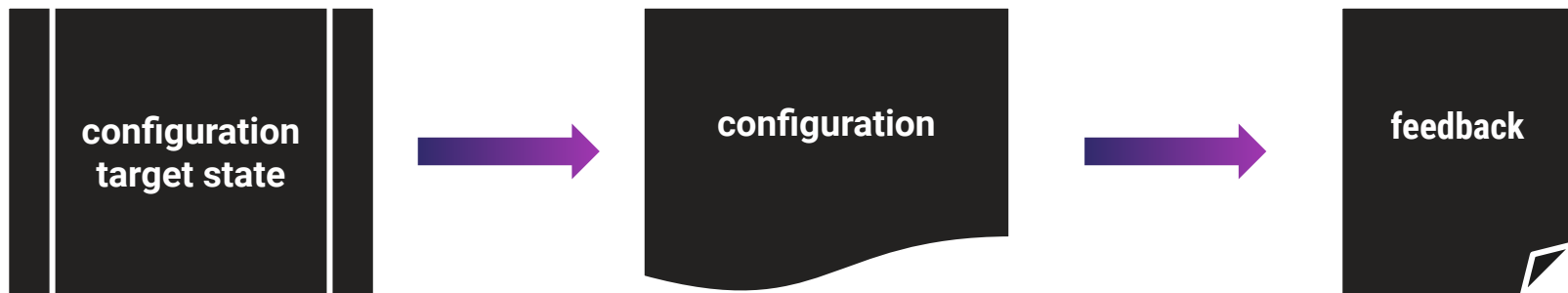
Configuration management is a systems engineering process for establishing and maintaining **consistency** of a product [...] throughout its life.



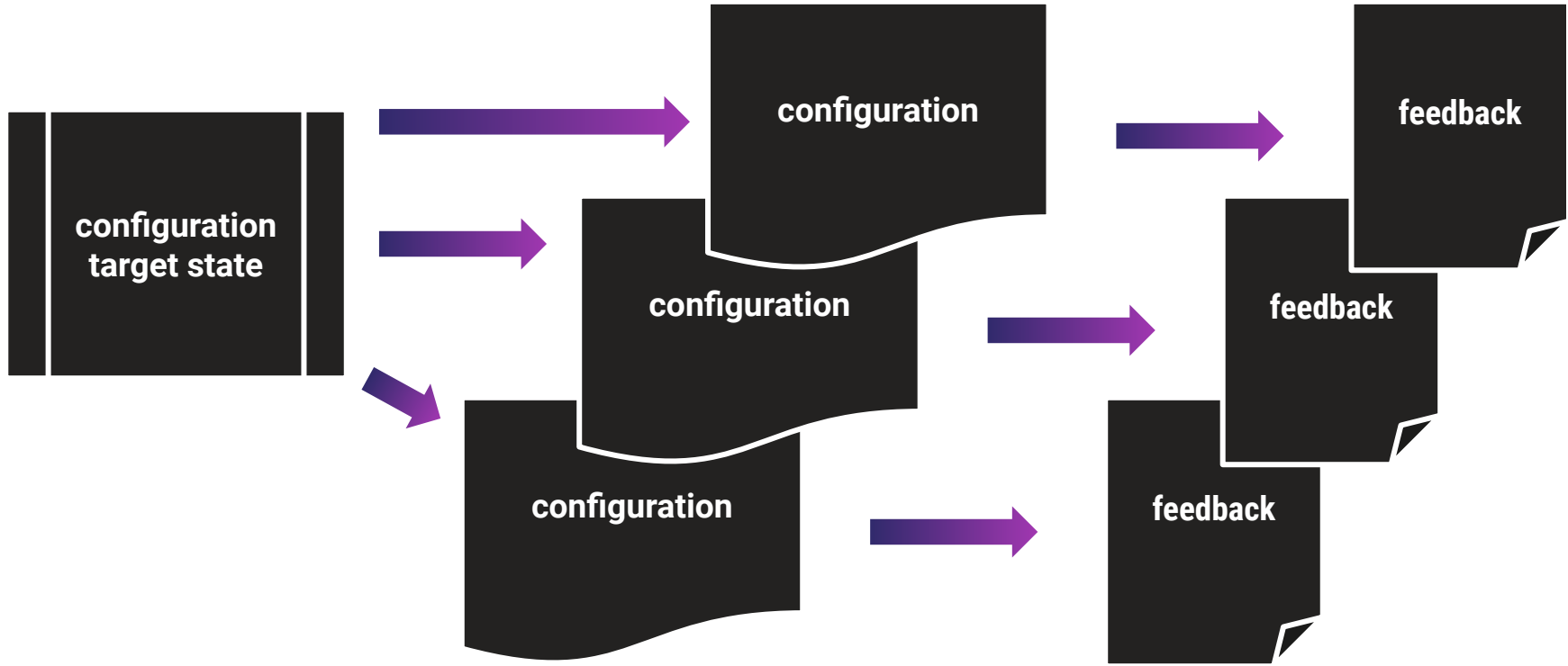
How DevSecOps can help to understand?



Let's remember: What does configuration management do?



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“

Observability is a measure of how well **internal states** of a system can be inferred from knowledge of its **external outputs**.

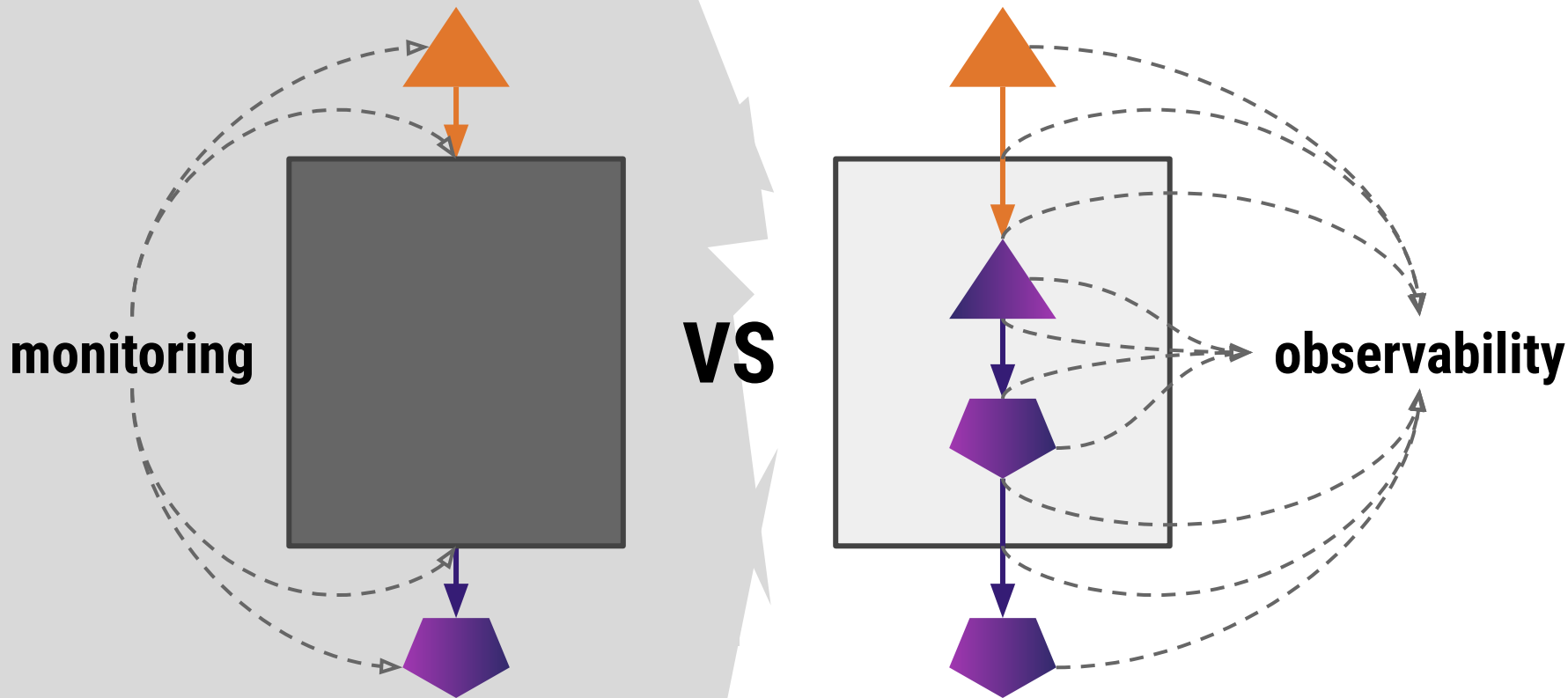


Observability

Monitoring VS Observability: having a factual & deep insight



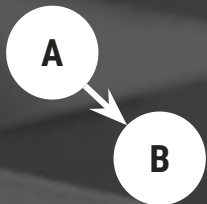
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Why we need Observability in Configuration Management?



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Causality

trust and prove
configuration states



Perspective

provide insights
relevant to different needs



Agency

help teams find
the best levers
for their job

Let's take an implementation example...



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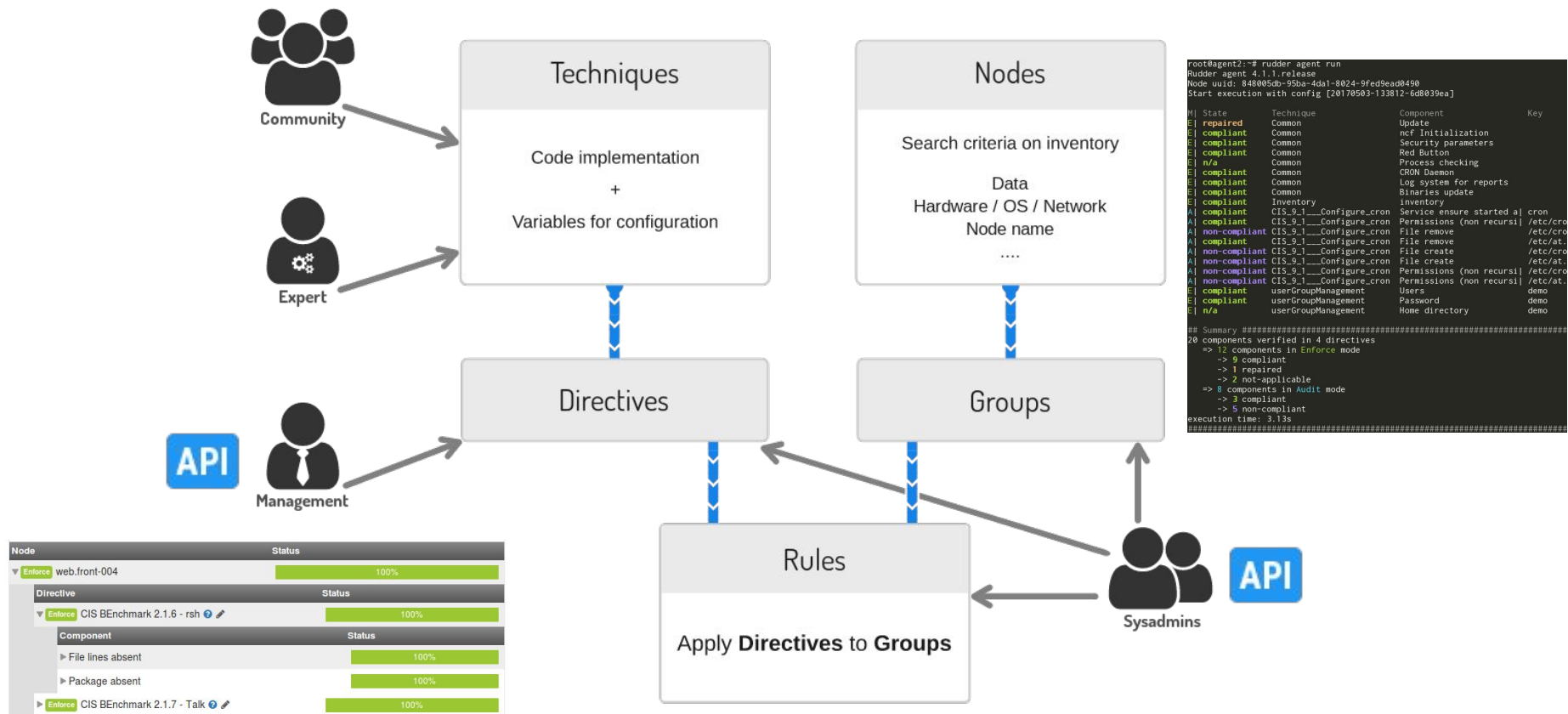
CONTINUOUS AUDITING & CONFIGURATION



These concepts are core to Rudder



Everyone/thing can be an actor of configuration management



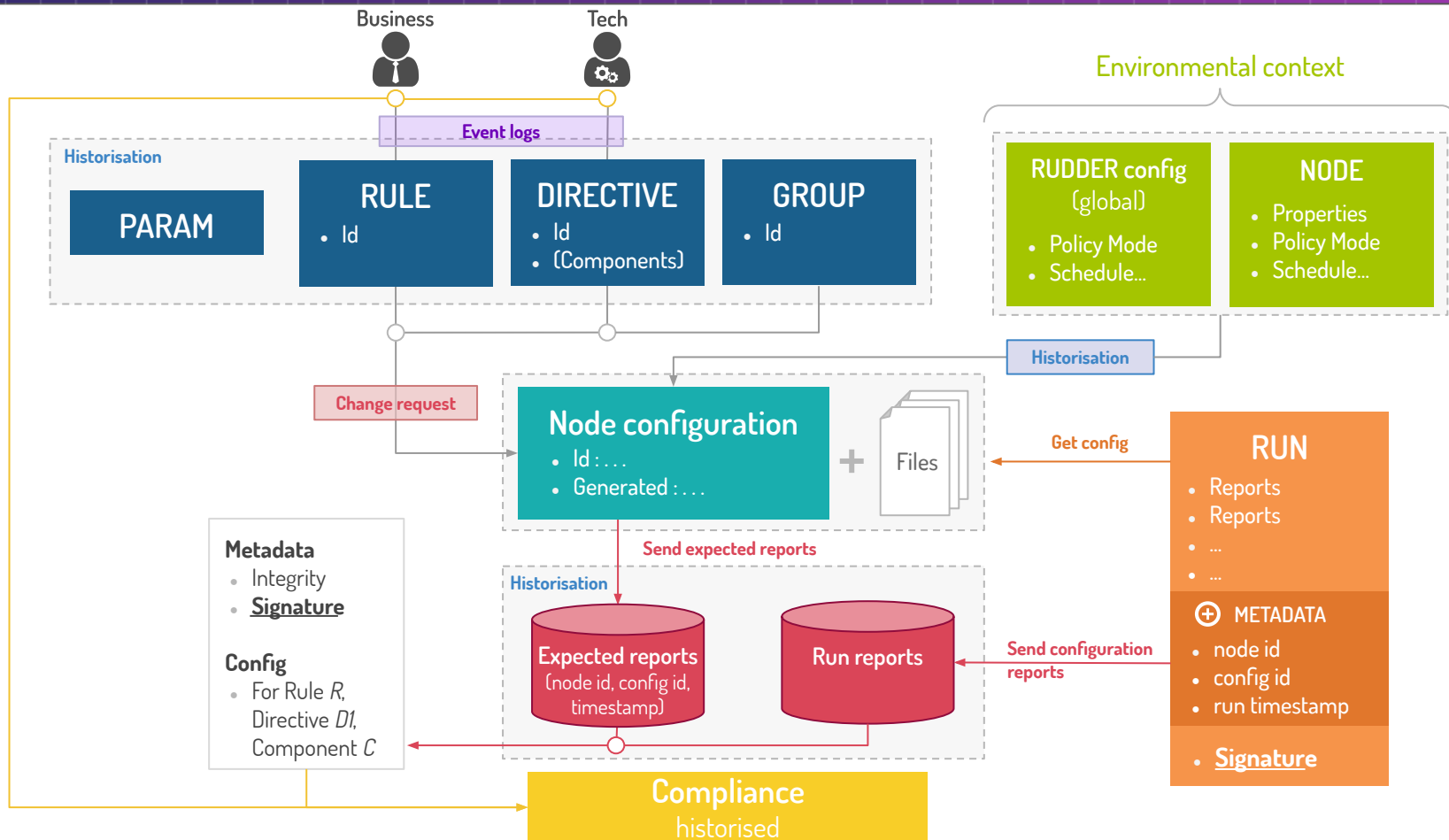
```
root@agent2:~# rudder agent run
Rudder agent 4.1.1 release
Node uuid: 848005db-95ba-4da1-8024-9fed9ead0490
Start execution with config [20170503-133812-6d8039ea]

#| State      Technique      Component      Key
E| repaired   Common              Update         nc
E| compliant  Common              ncf Initializa
E| compliant  Common              Security param
E| compliant  Common              Red Button
E| n/a        Common              Process checki
E| compliant  Common              CRON Daemon
E| compliant  Common              Log system for
E| compliant  Common              Binaries updat
E| compliant  Inventory            Inventory
A| compliant  CIS_9.1__Configure_cron  Service ensur
A| compliant  CIS_9.1__Configure_cron  Permissions (n
A| non-compl  CIS_9.1__Configure_cron  File remove   /etc/cro
A| compliant  CIS_9.1__Configure_cron  File create   /etc/at
A| non-compl  CIS_9.1__Configure_cron  File create   /etc/at
A| non-compl  CIS_9.1__Configure_cron  Permissions (n
A| non-compl  CIS_9.1__Configure_cron  Permissions (n
E| compliant  userGroupManagement     Users         demo
E| compliant  userGroupManagement     Password     demo
E| n/a        userGroupManagement     Home direct
demo

## Summary #####
20 components verified in 4 directives
=> 12 components in Enforce mode
-> 9 compliant
-> 1 repaired
-> 2 not-applicable
=> 8 components in Audit mode
-> 3 compliant
-> 5 non-compliant
execution time: 3.13s
```

Node	Status
Enforce web.front-004	100%
Directive	Status
Enforce CIS Benchmark 2.1.6 - rsh	100%
Component	Status
File lines absent	100%
Package absent	100%
Enforce CIS Benchmark 2.1.7 - Talk	100%

Observability and how Rudder can prove the compliance?



French, mature and open-source of
continuous configuration compliance



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CONTINUOUS AUDITING & CONFIGURATION



Manage OS, middleware and software level



Team oriented (WebUI, CLI, API)



Audit only or automatic drift remediation



Continuous reporting and dashboarding



Thank you !

Any questions ?

5mn Survey on SecOps:
bit.ly/pts19-secops

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