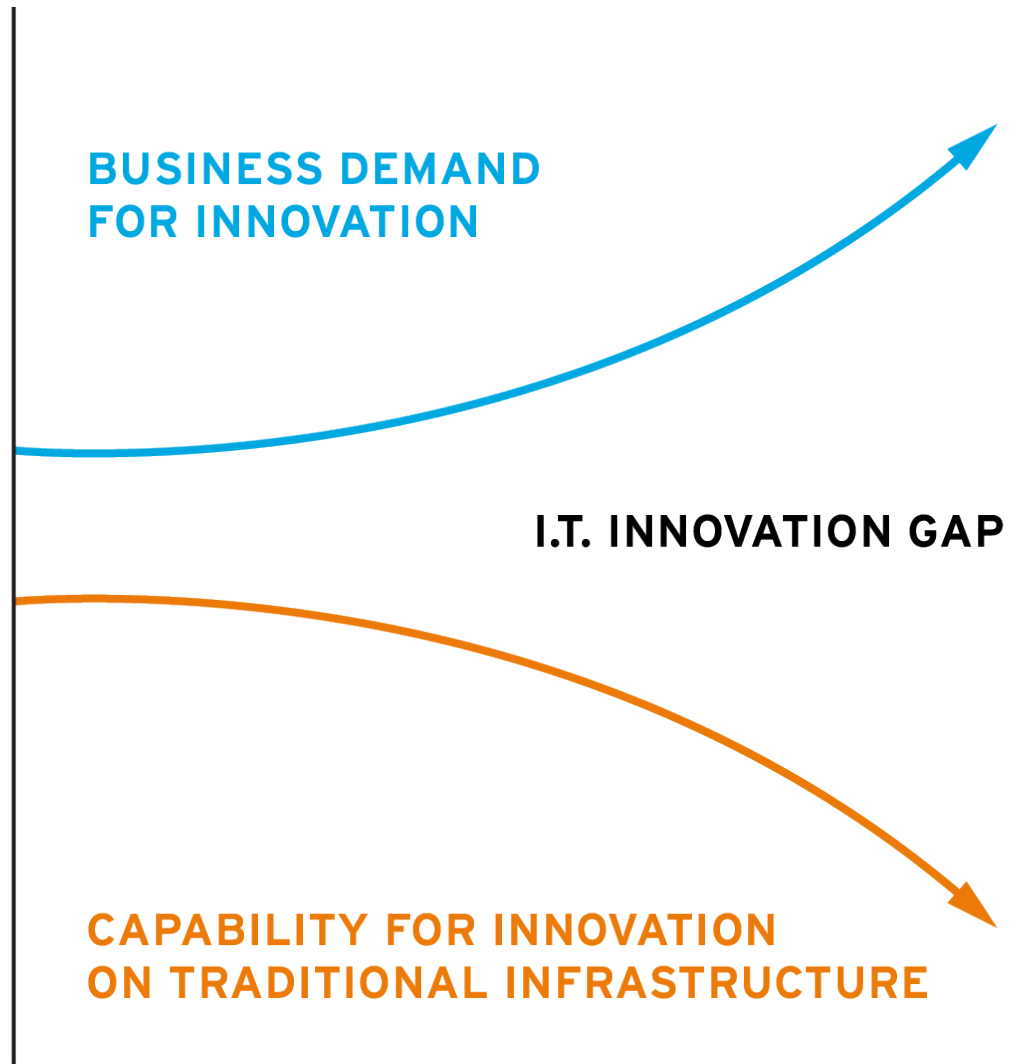




# OPENSIFT ACCÉLÉREZ LE DÉVELOPPEMENT AVEC UN PAAS

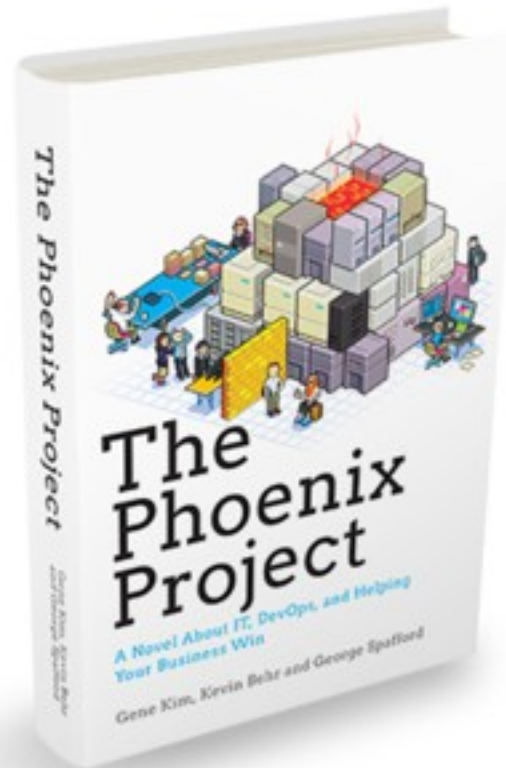
Michael Lessard, RHCA  
Senior Solutions Architect  
December, 2014  
 michaellessard

# BUSINESS DEMANDS DRIVE I.T. TRANSFORMATION



- Business wants agility, lower cost, new capabilities
- IT struggling with existing legacy infrastructure architecture and cost model
- Cloud providers are using next-generation IT built on open source technologies
- IT needs to adopt cloud architectures and technologies to close innovation gap

# WHAT IS DEVOPS?



A methodology to deliver software more efficiently by emphasizing on collaboration, communication and integration between development and I.T. operations.

# TYPICAL DEVELOPMENT LIFECYCLE



## PHYSICAL

1. Have Idea
2. Get Budget
3. Submit Hardware Request
4. Wait...
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6. Rack and Stack Hardware
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8. Install Operating System Patches
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## VIRTUAL

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# WHAT IF...

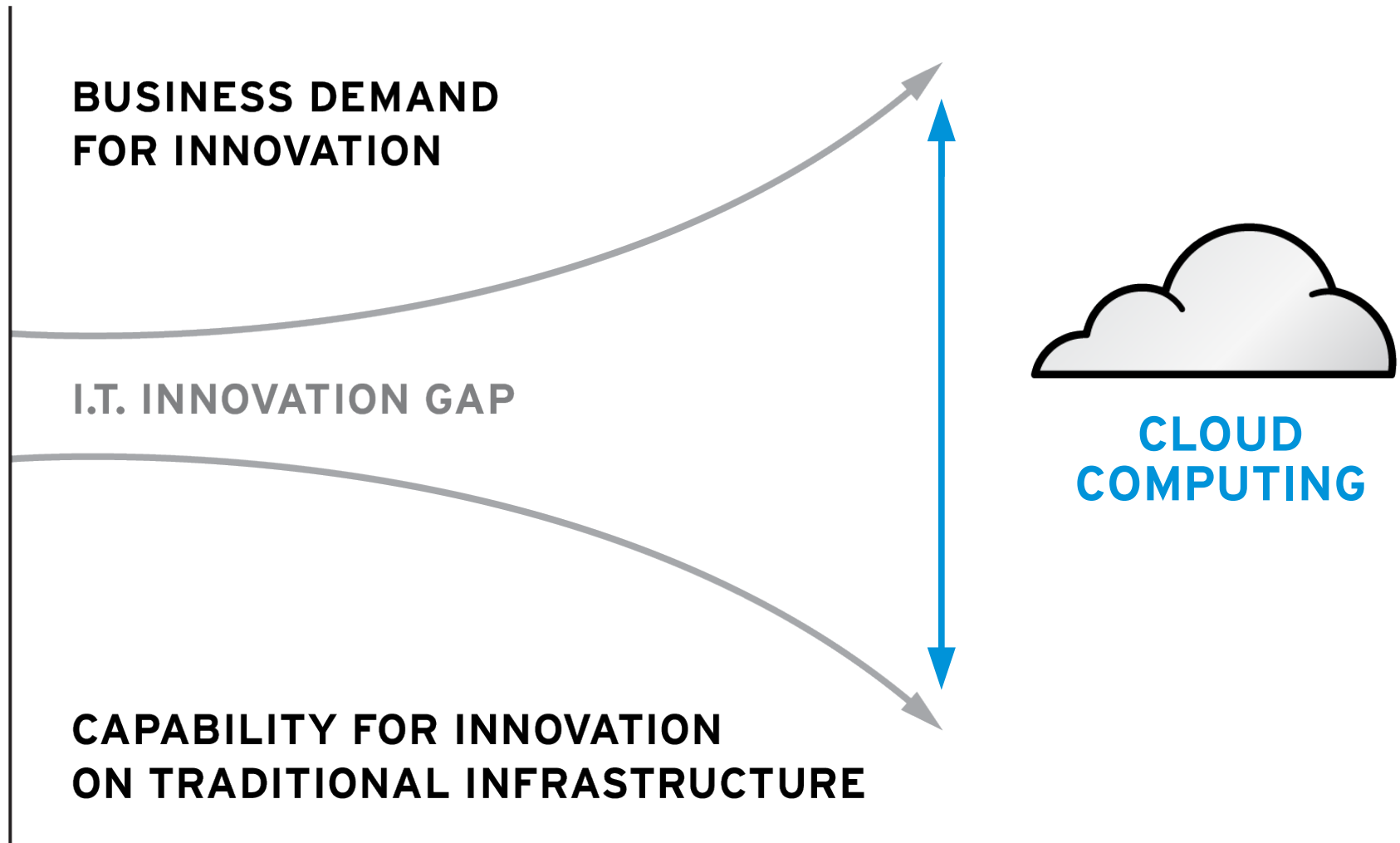


We could **automate** environment provisioning?

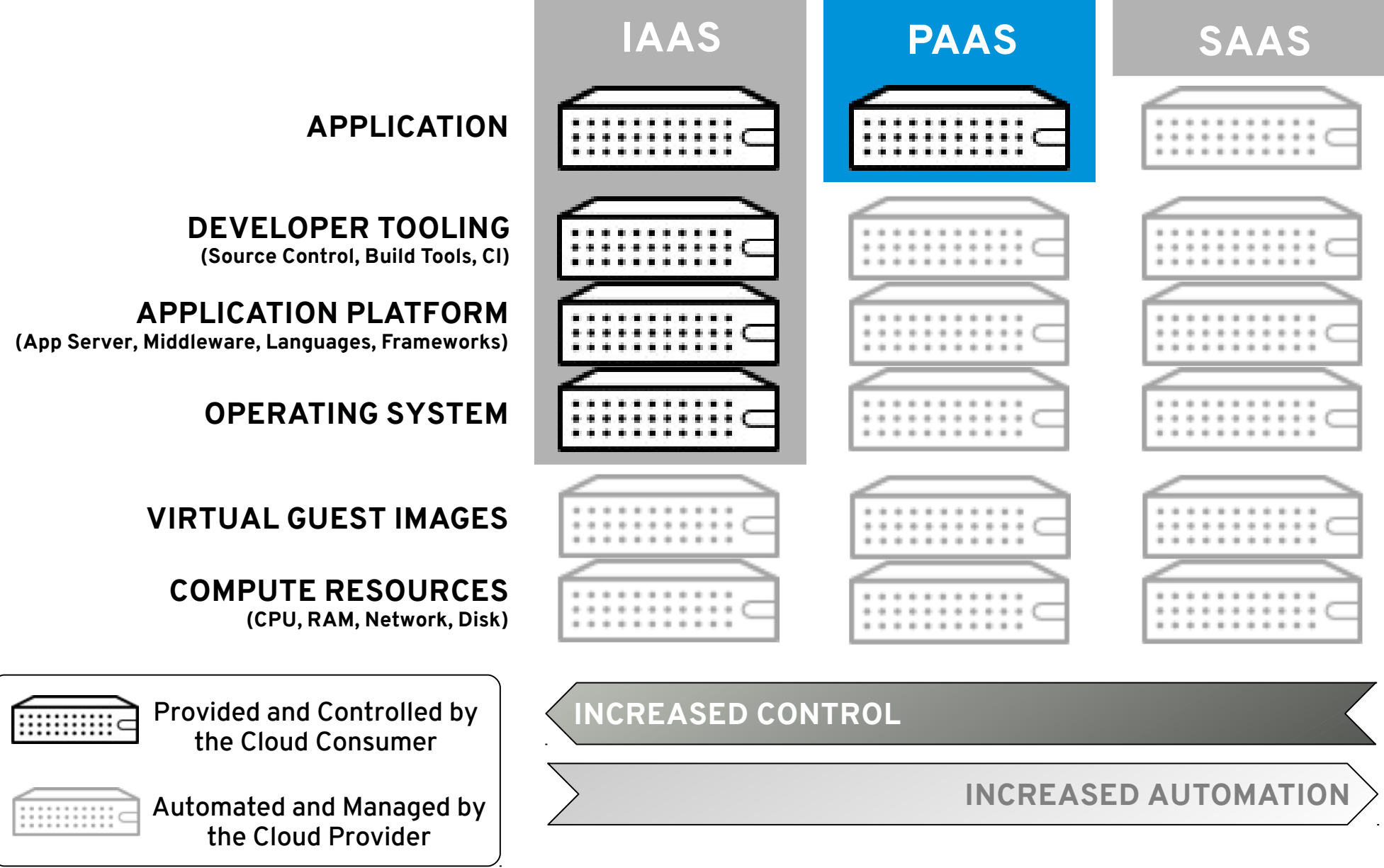
We could **standardize** technology stacks and platforms?

We could **consolidate** our resources and pool usage?

# CLOUD CLOSES THE INNOVATION GAP



# CLOUD SERVICE MODELS





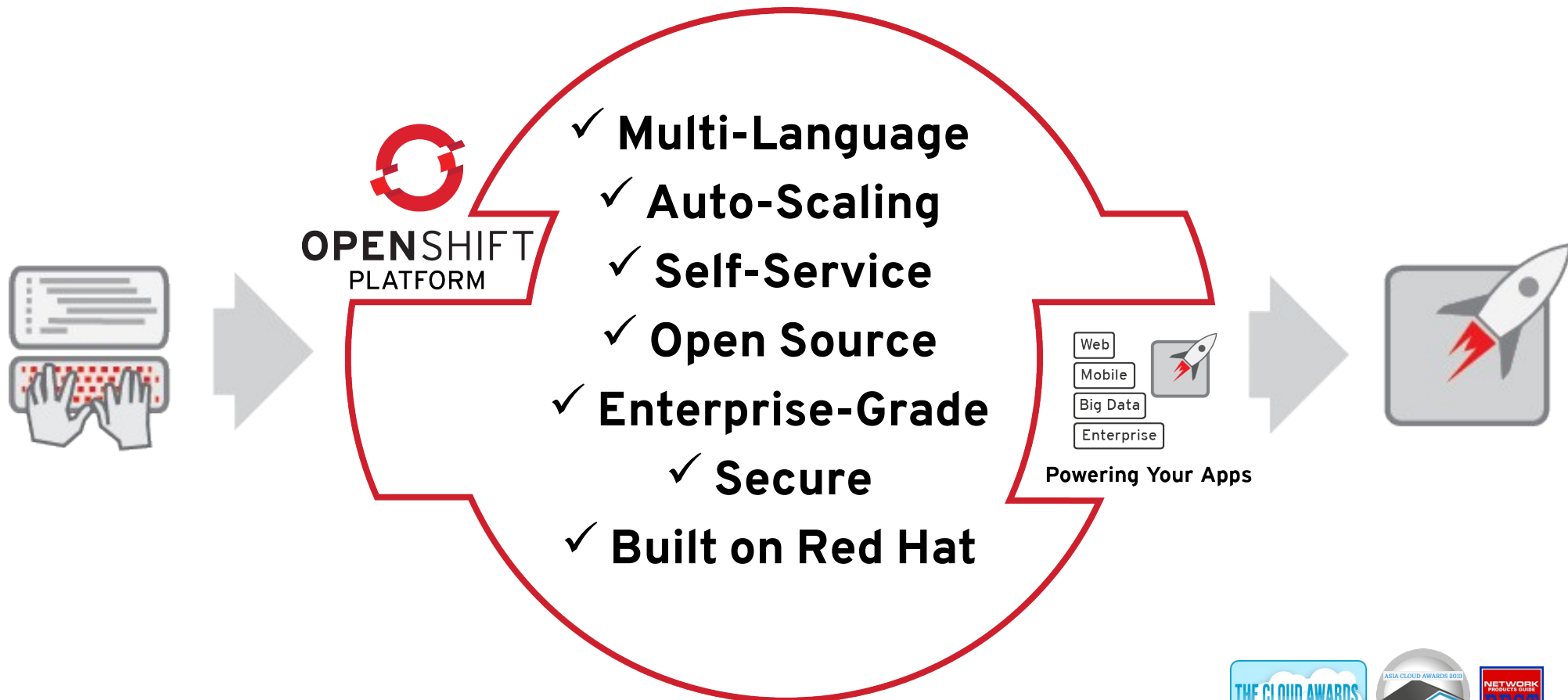
# IMPLEMENTING A PAAS

Gartner

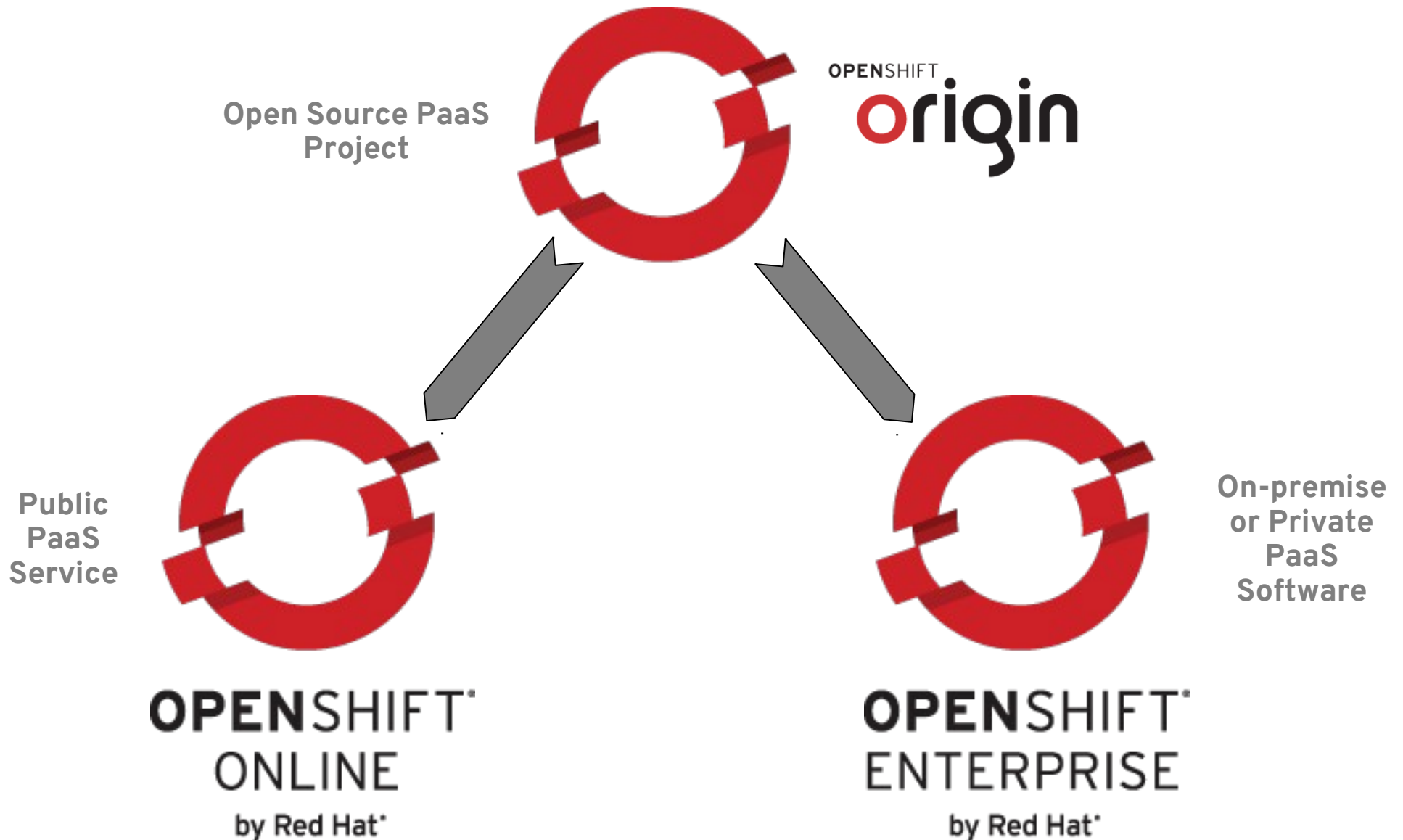
“The use of Platform-as-a-Service technologies will enable IT organizations to become more agile and more responsive to the business needs. —GARTNER



# OPENSIFT IS PAAS BY RED HAT



# RED HAT'S PAAS STRATEGY



**You're one shell command away from  
deploying your own Platform as a Service.**

**<http://install.openshift.com>**



## OPENS SHIFT PAAS ON YOUR CHOICE OF CLOUD OR INFRASTRUCTURE...



**Public - Hybrid - Private - Virtualization - Bare Metal**

## THE FOUNDATION OF OPENSIFT IS RED HAT ENTERPRISE LINUX

RHEL

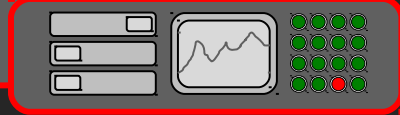
RHEL

RHEL

- OpenShift is built on instances of Red Hat Enterprise Linux (RHEL)
- OpenShift can run anywhere RHEL can run

Public - Hybrid - Private - Virtualization - Bare Metal

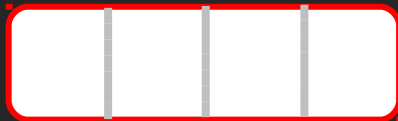
## AN OPENSIFT BROKER MANAGES MULTIPLE OPENSIFT NODES



**Broker (RHEL)**

### OpenShift Broker

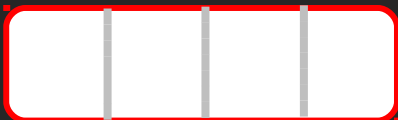
Management and Orchestration Engine



**Node (RHEL)**

### OpenShift Nodes

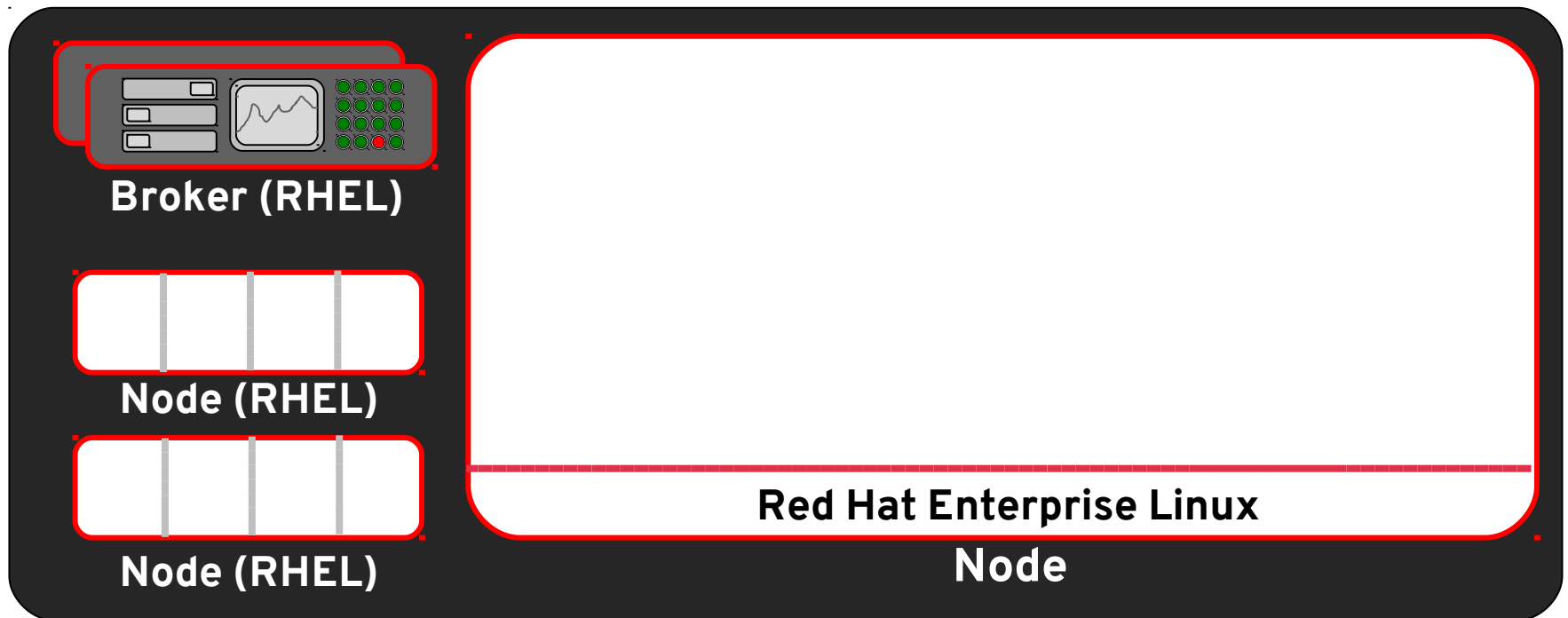
Application Hosting Infrastructure



**Node (RHEL)**

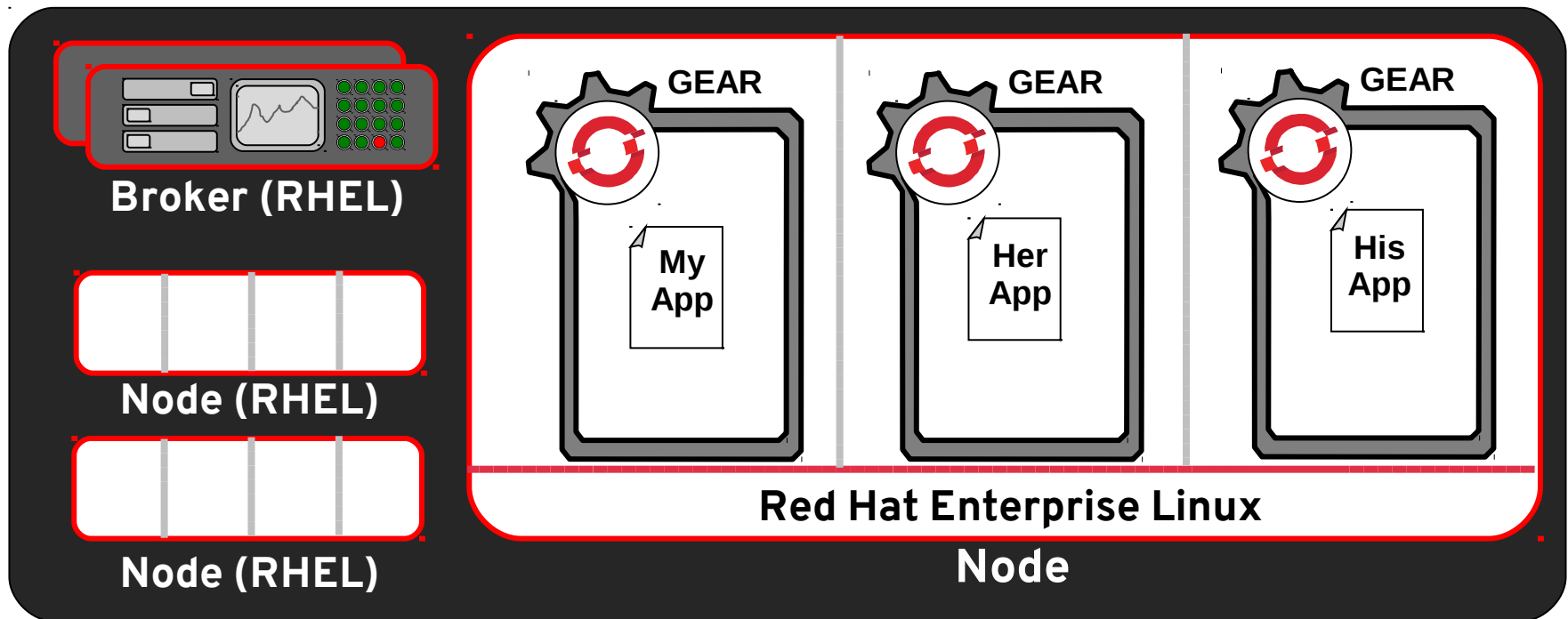
Public - Hybrid - Private - Virtualization - Bare Metal

## A NODE IS AN INSTANCE OF RHEL



Public - Hybrid - Private - Virtualization - Bare Metal

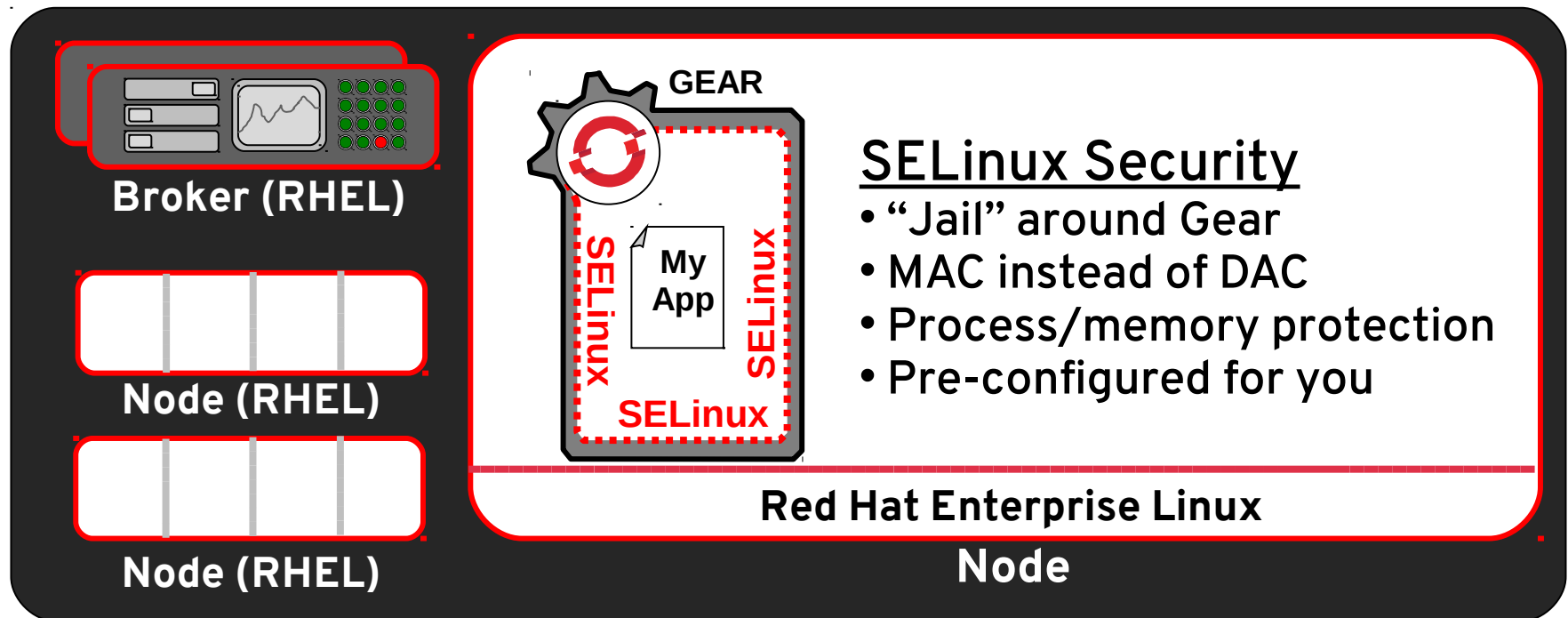
## OPENSIFT USER APPLICATIONS RUNS IN CONTAINERS CALLED GEARS



Public - Hybrid - Private - Virtualization - Bare Metal

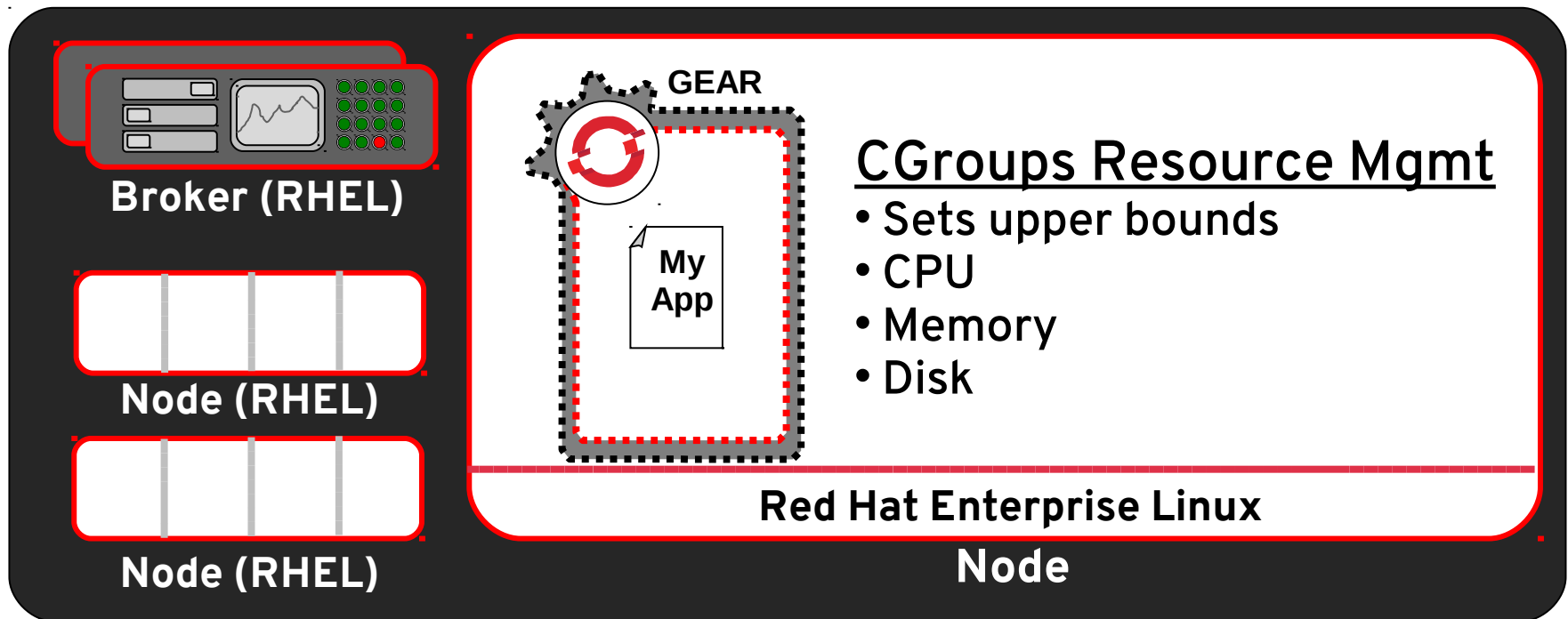


## GEARS USE SELINUX FOR PRE-CONFIGURED, NSA-GRADE SECURITY



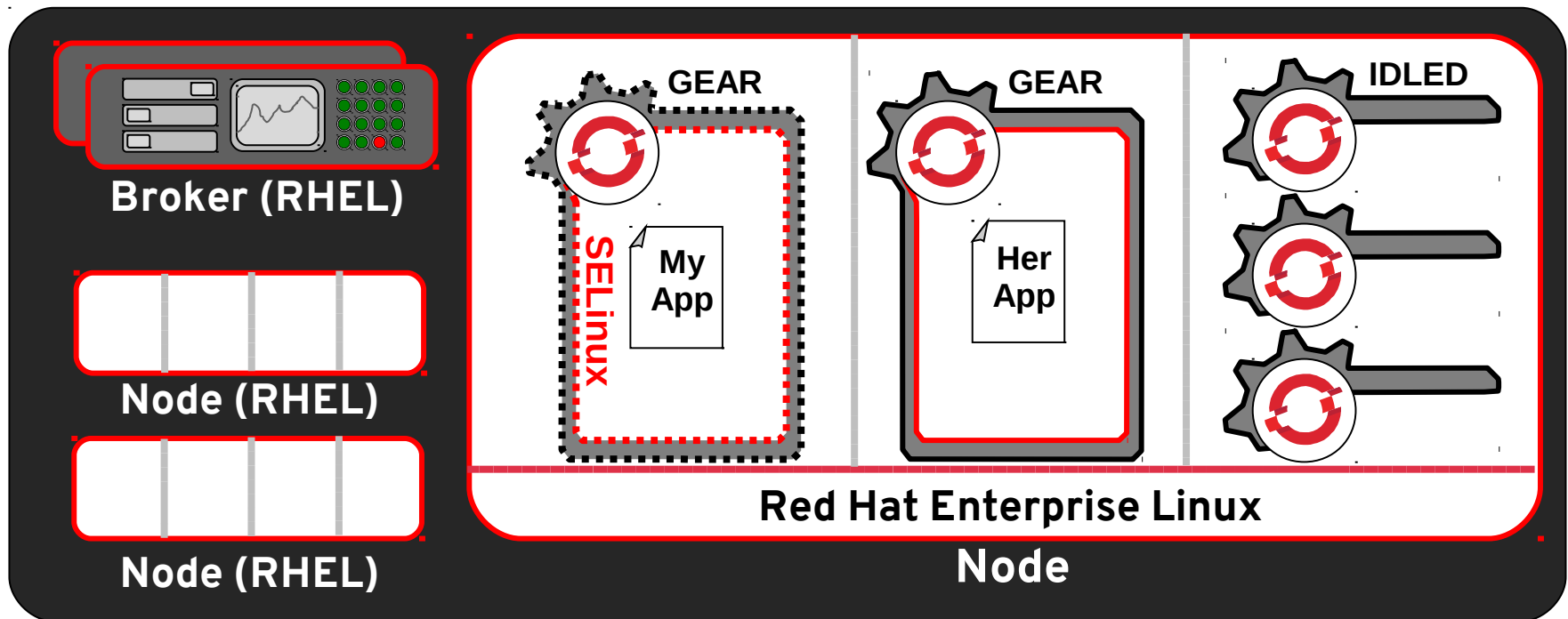
Public - Hybrid - Private - Virtualization - Bare Metal

## GEARS USE LINUX CGROUPS FOR RESOURCE MANAGEMENT



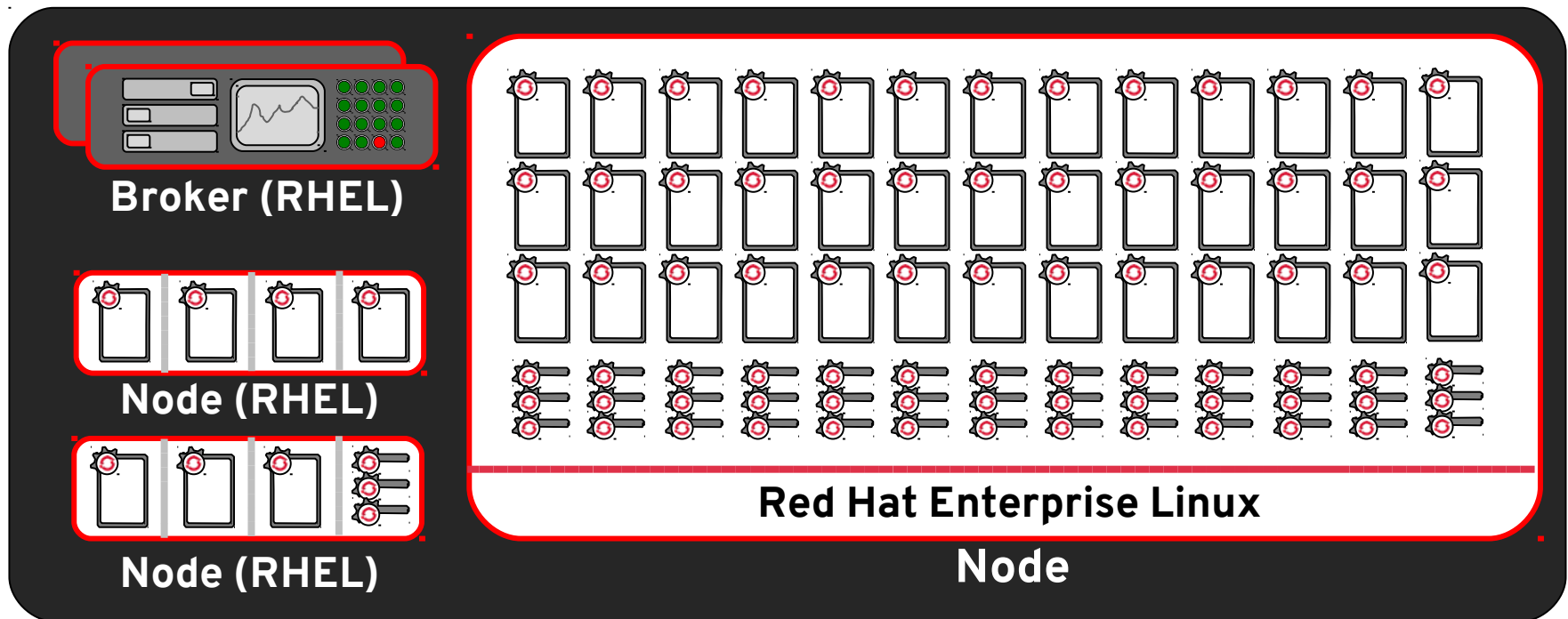
Public - Hybrid - Private - Virtualization - Bare Metal

## IDLE GEARS CAN BE “DE-HYDRATED” BY THE OPENSIFT BROKER



Public - Hybrid - Private - Virtualization - Bare Metal

## OPENSIFT MULTI-TENANCY PROVIDES DENSITY, EFFICIENCY, AND SECURITY



Public - Hybrid - Private - Virtualization - Bare Metal



# STREAMLINING DEVELOPMENT WITH OPENSIFT

Gartner

“The use of Platform-as-a-Service technologies will enable IT organizations to become more agile and more responsive to the business needs. —GARTNER

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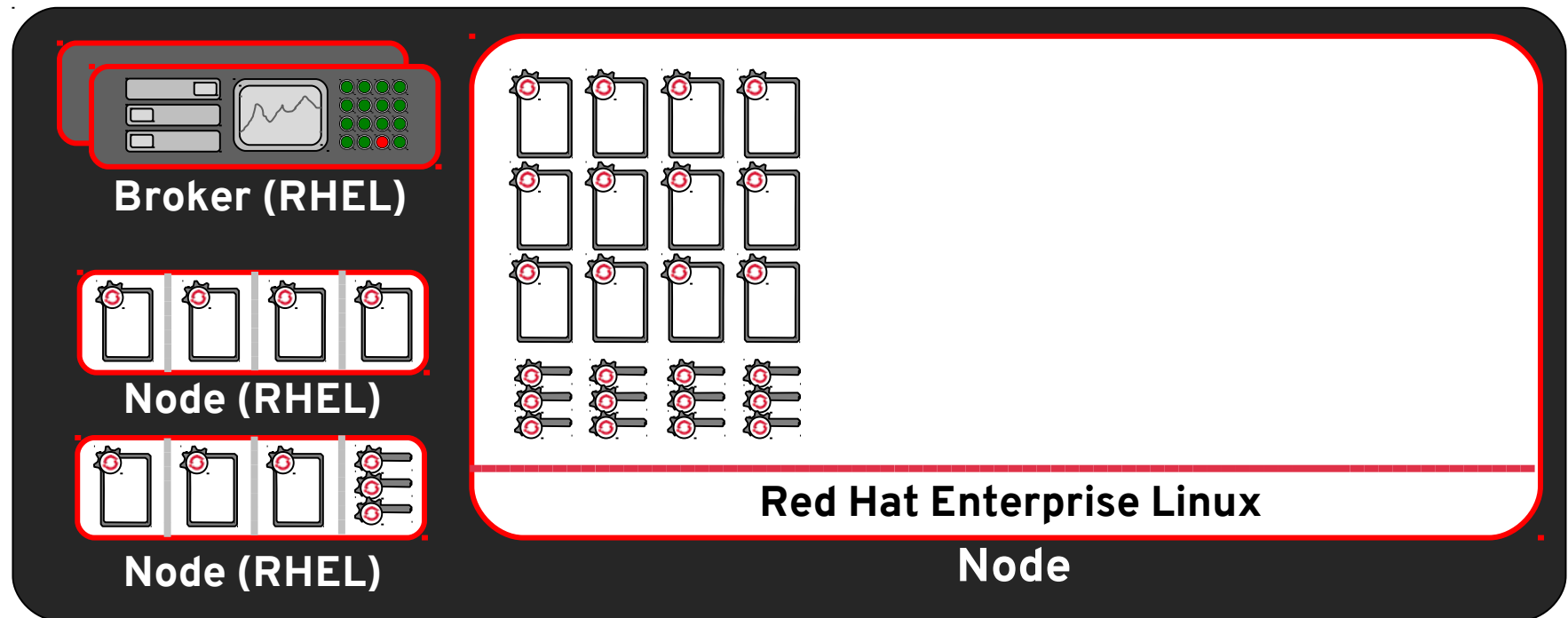
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# DEVELOPER WORKFLOW



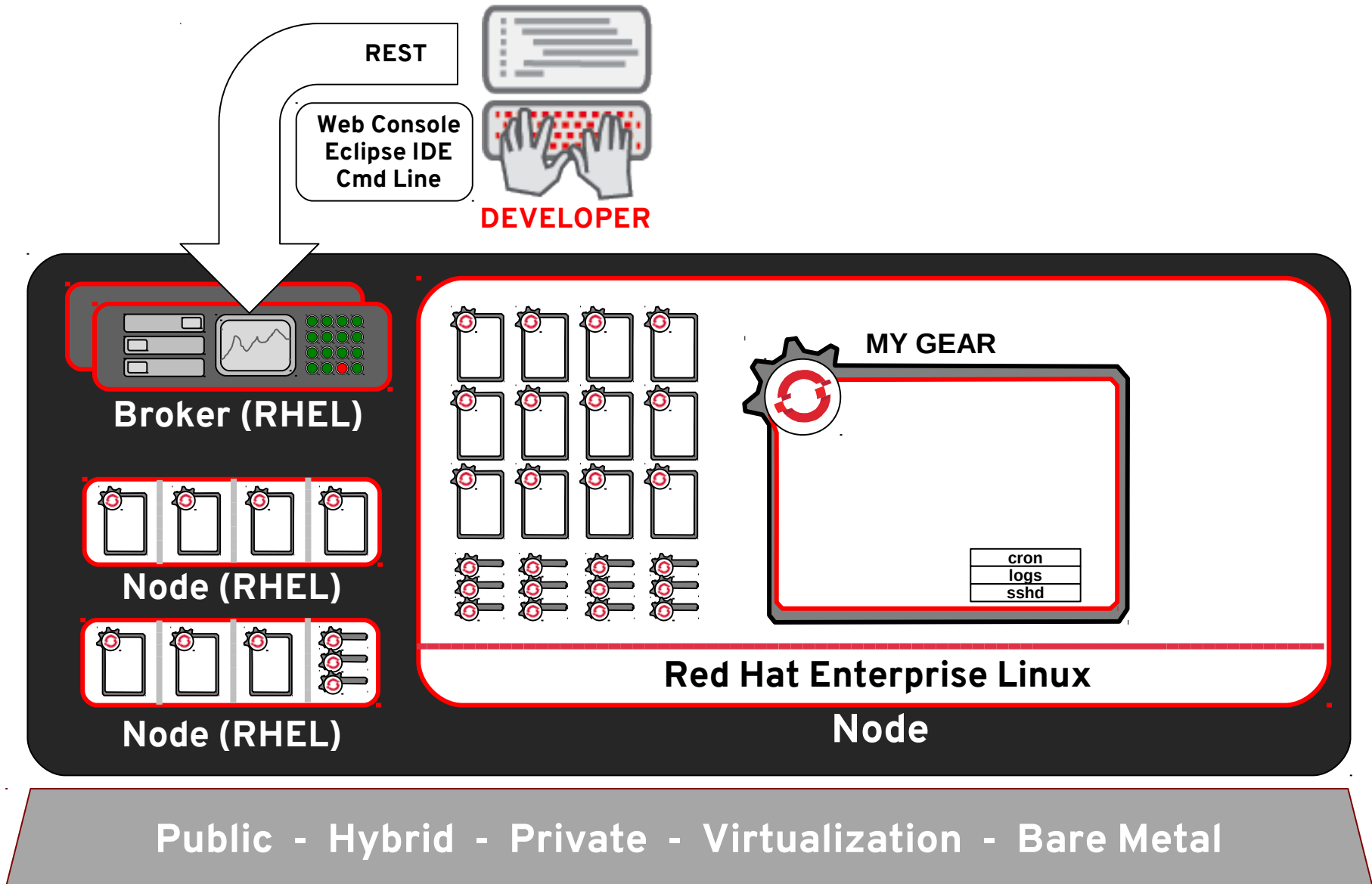
**DEVELOPER**

A developer has a new idea for an application. First, they need to create a new gear in OpenShift...



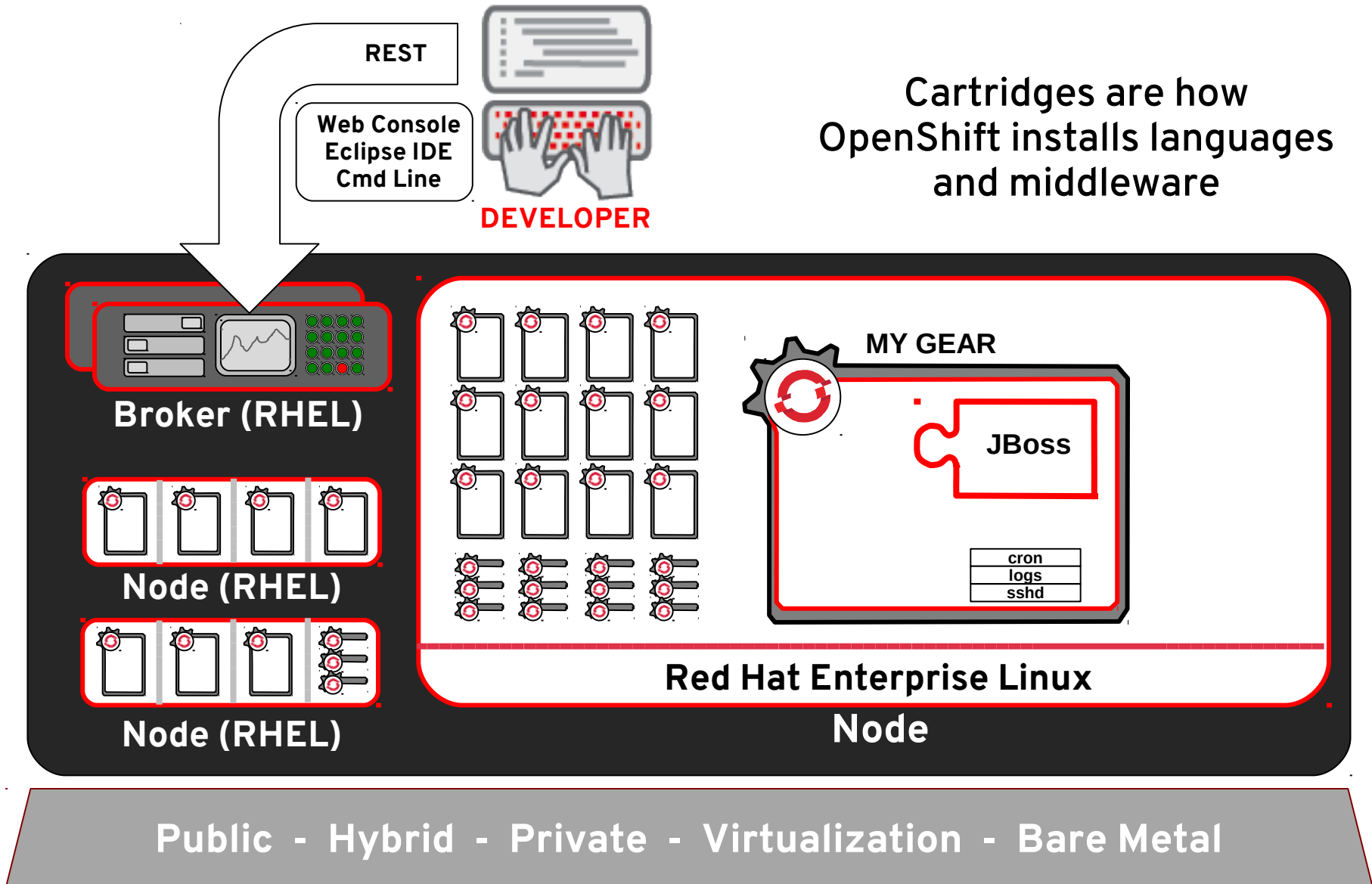
Public - Hybrid - Private - Virtualization - Bare Metal

# GEAR CREATION (WEB, CLI, ECLIPSE)



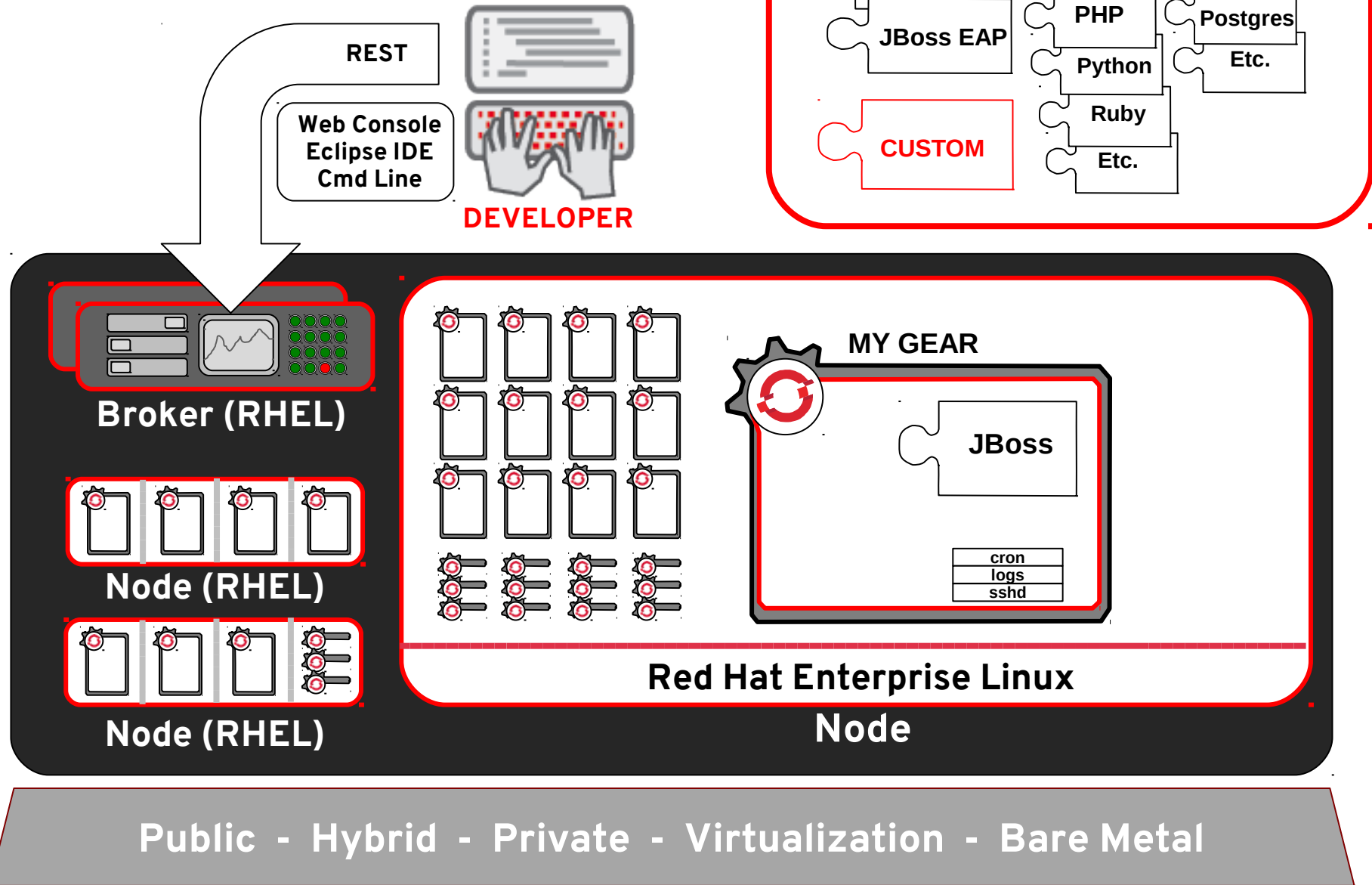


# OPENSIFT AUTOMATES GEAR CONFIGURATION VIA CARTRIDGES

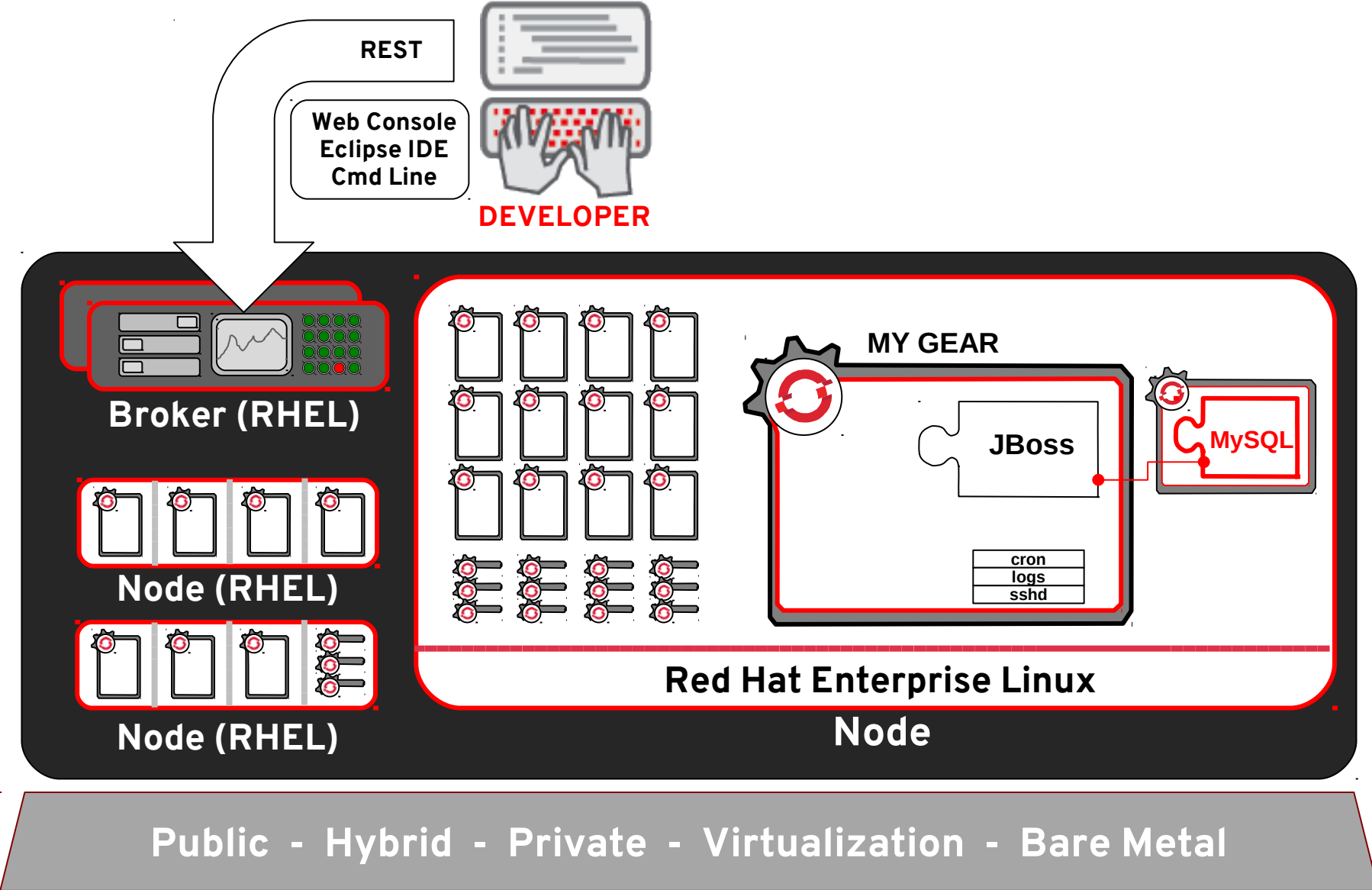


Cartridges are how OpenShift installs languages and middleware

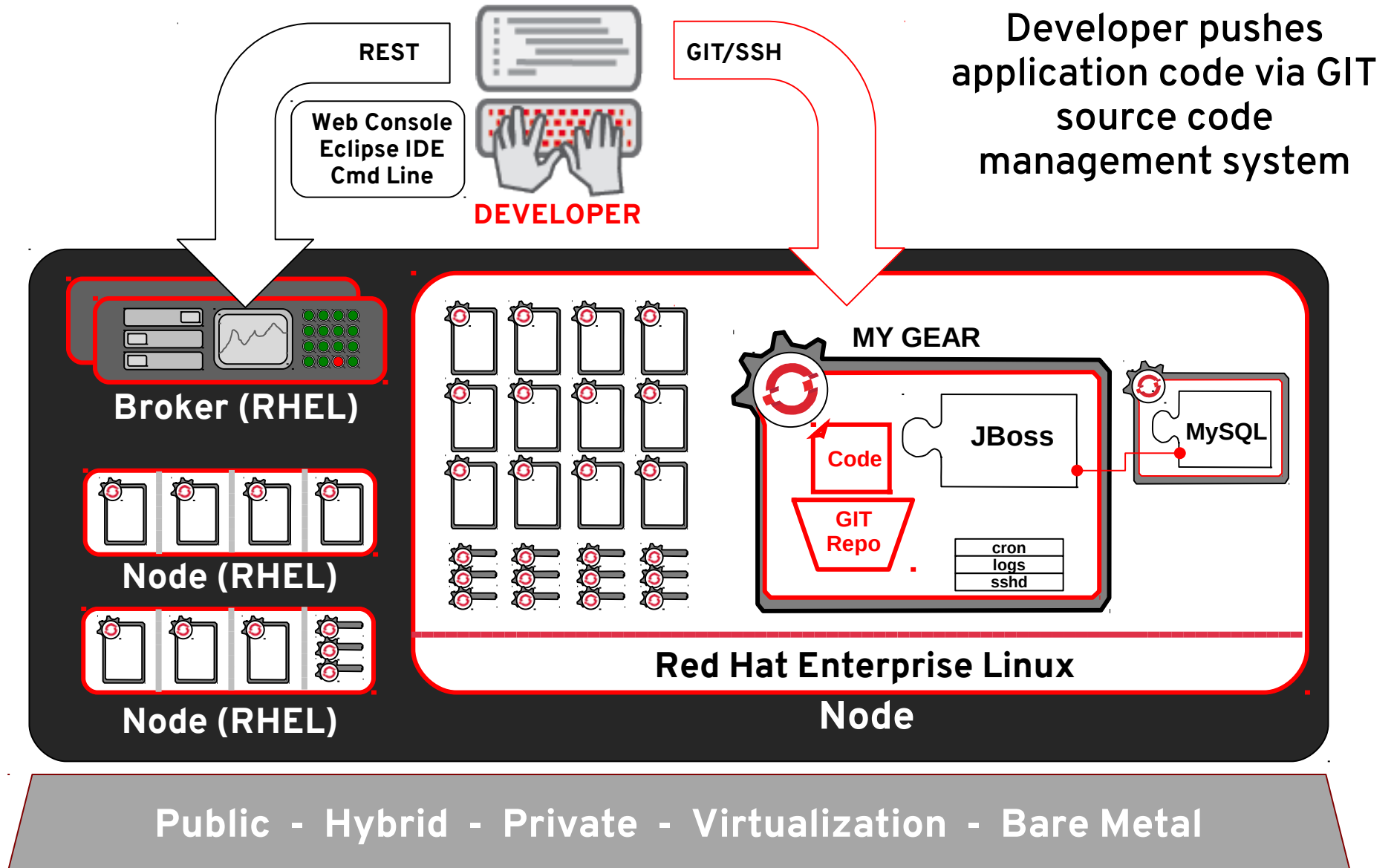
# CARTRIDGE TYPES



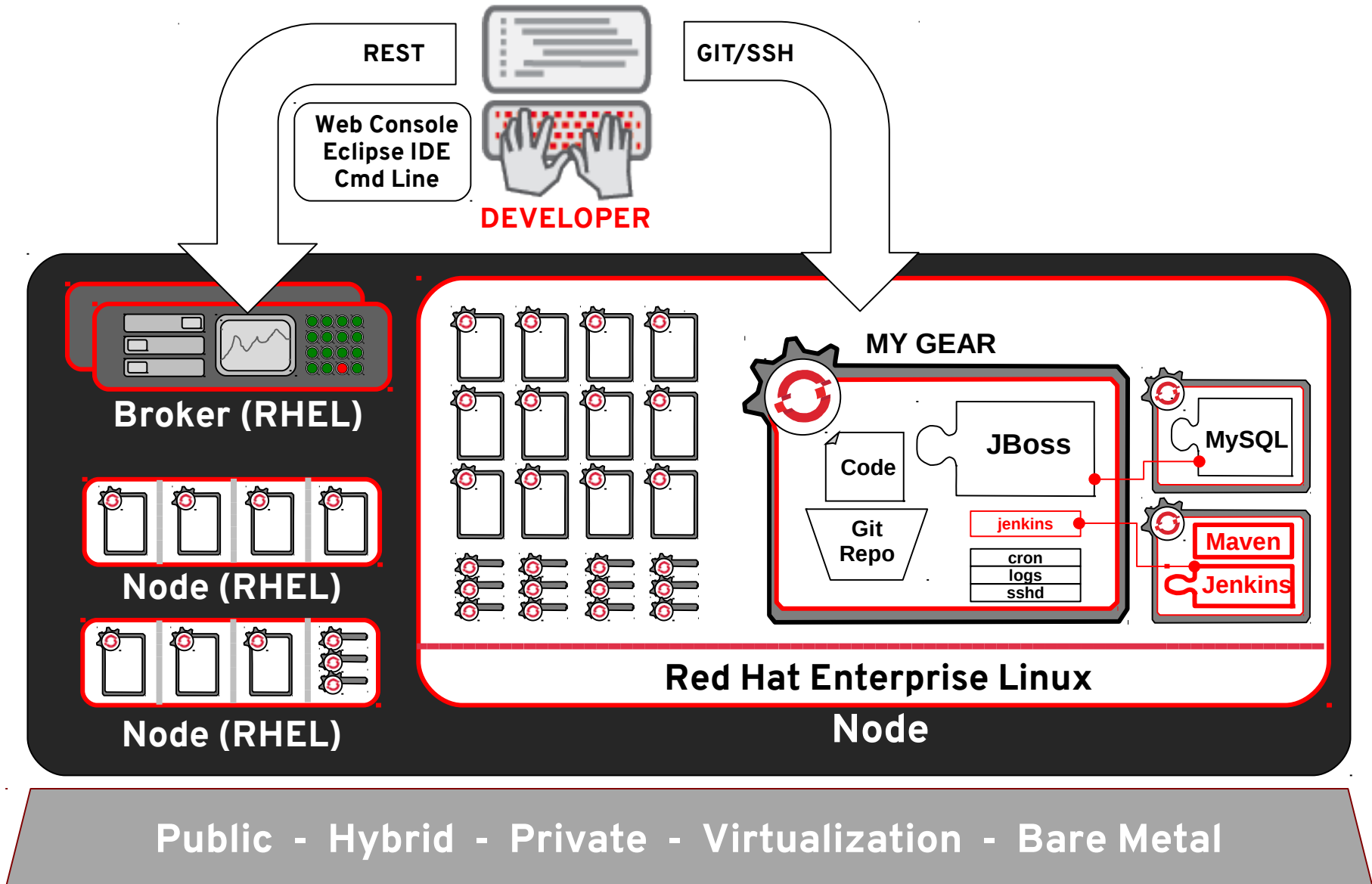
# OPENSIFT AUTOMATES GEAR CONFIGURATION VIA CARTRIDGES



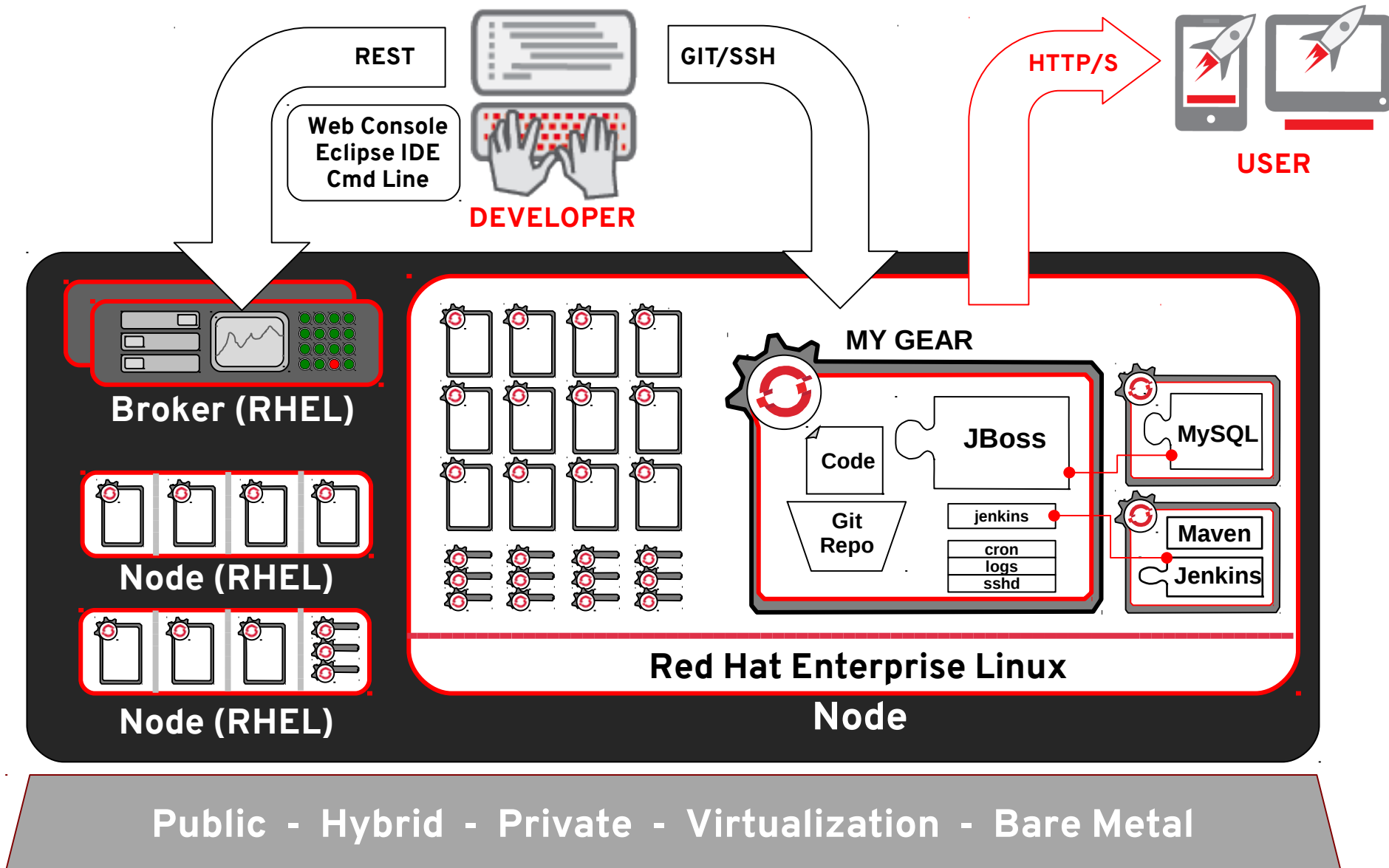
# NOW, CODE AND PUSH



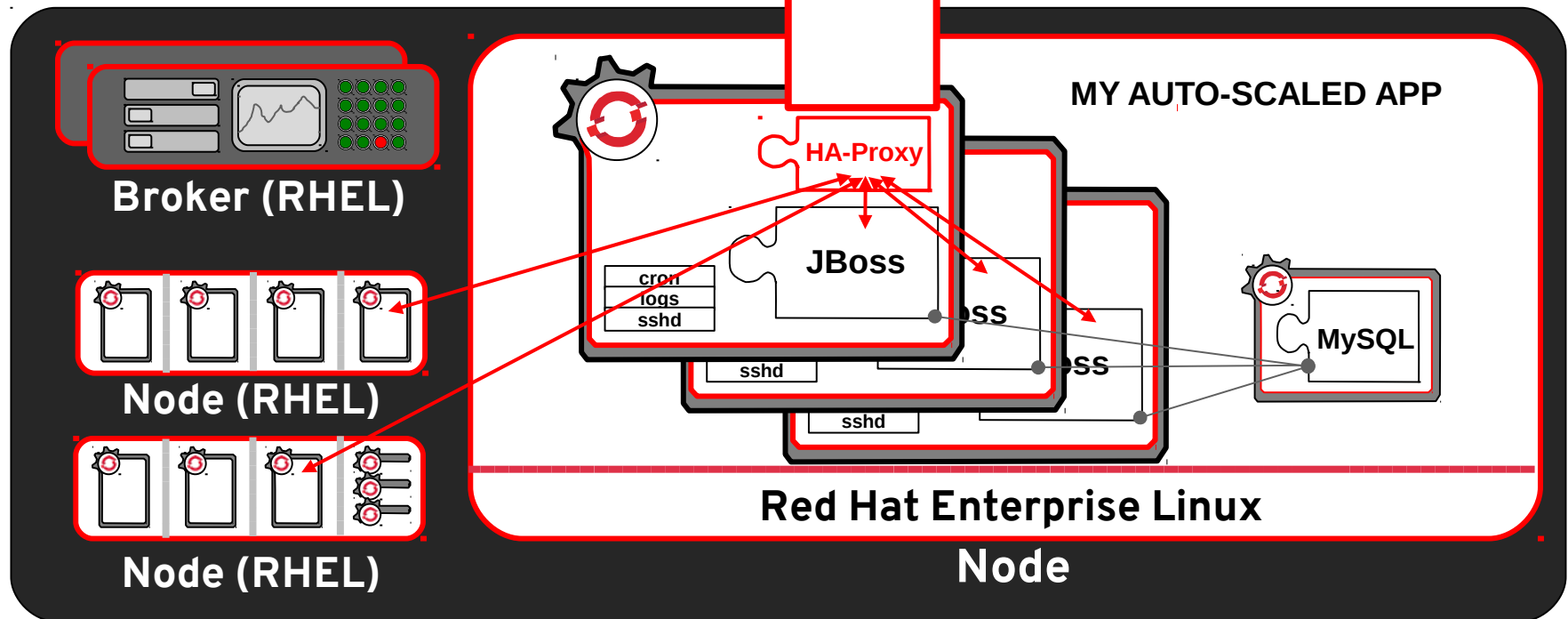
# OPENSIFT CAN AUTOMATED BUILD AND TEST WITH MAVEN AND JENKINS FOR CI



# HTTP(S) SERVED FROM GEARS



# OPENSIFT AUTOMATES APPLICATION SCALING



Public - Hybrid - Private - Virtualization - Bare Metal

# STREAMLINING DEVELOPMENT WITH PAAS



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## WITH PAAS

1. Have Idea
2. Get Budget
3. Code
4. Test
5. Launch
6. Automatically Scale

CRAFTWORK

ASSEMBLY LINE





**OPENSIFT**

# JOURNEY TO THE CLOUD

Deliver more,  
quicker, and with  
less

Improve  
consistency and  
quality of solutions

Self-service  
provisioning

Accelerated  
development

Improved resource  
utilization with  
deployment density

Automated  
scaling

Enterprise-grade  
security

**BUSINESS**

**DEVELOPMENT**

**I.T. OPERATIONS**

# PAYPAL ON OPENSIFT ENTERPRISE

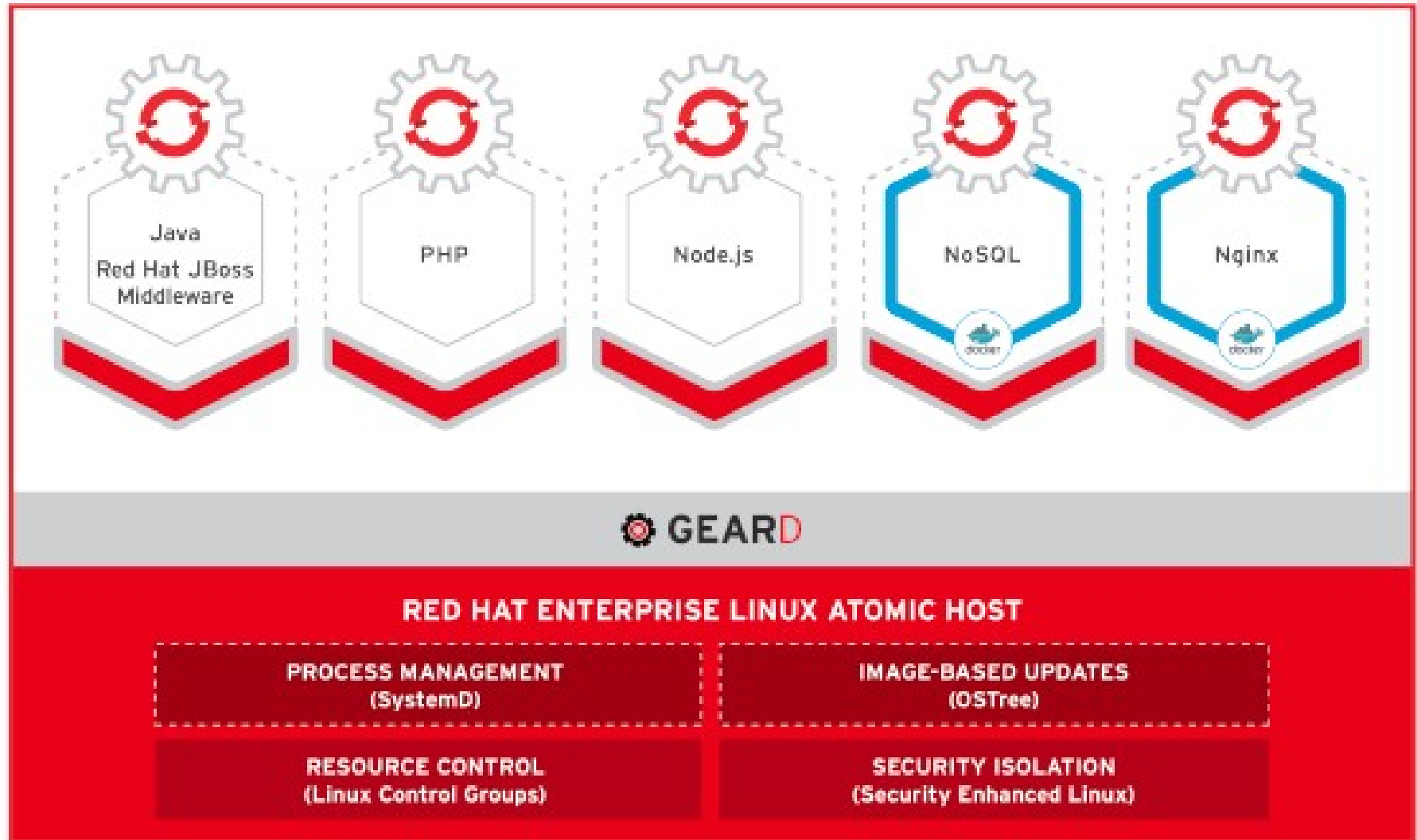
"Our motto is enable and get out of the way"

"With OpenShift we've built a push-button developer stack"

"In minutes we have you up and running in a fully connected container and you are developing"



# OPENSIFT 3 - COMING IN 2015





# THANK YOU.

Want to keep  
In touch?

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on YouTube



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