Hewlett Packard Enterprise

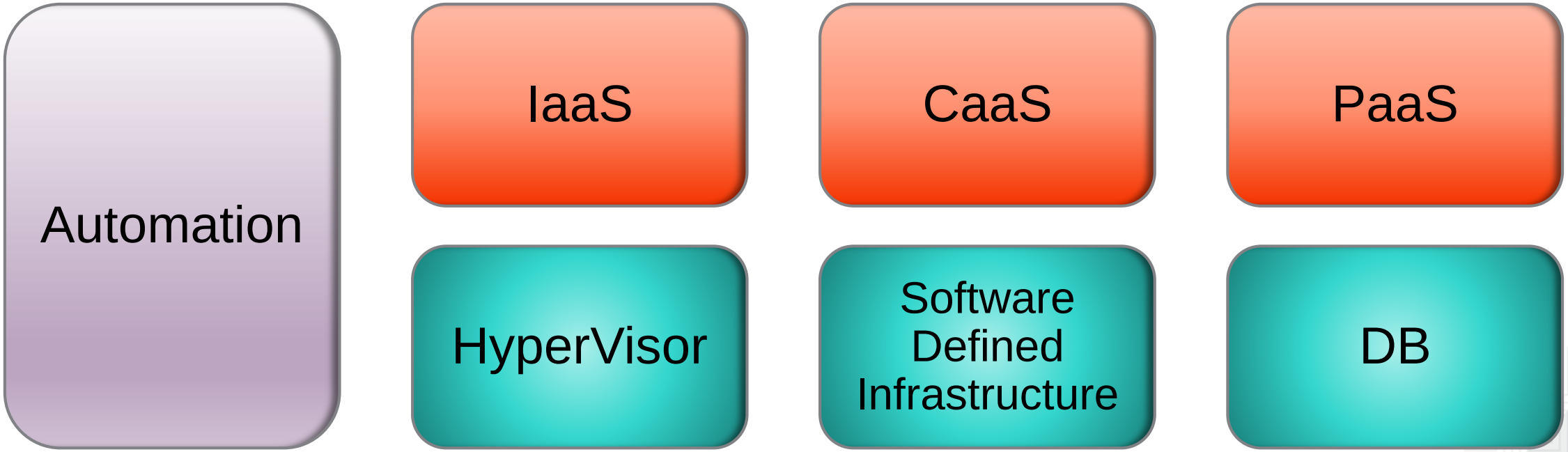
redhat

OpenShift with HPE

14/11/17

Yaki Shaaltiel

IT Infrastructure Blocks In The Cloud Era



Hewlett Packard
Enterprise

Your Users Demands More

How end users see technology

- **Access** – anywhere and anytime
- **Zero tolerance** for bugs
- Get **amazing features** frequently

How organizations see technology

- **Change** causes issues
- **Change** is expensive
- **Change** is not optional, it is a **MUST**

Jim Whitehurst, President and CEO , Red Hat

“Open source isn’t about saving money, it’s about doing more stuff, and getting incremental innovation with the finite budget you have”


Yes We're
OPEN


OPEN


Yes WE'RE
OPEN


Open


OPEN


OPEN


Come in We're
OPEN


Open


OPEN


Come in WE'RE
OPEN


OPEN


YES...WE ARE
OPEN


OPEN


open


Come in WE'RE
OPEN


Come in
WE'RE
Open


OPEN


OPEN


IT'S
OPEN


Come in We're
OPEN


OPEN


Come in We're
OPEN


Come in
WE'RE
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Open

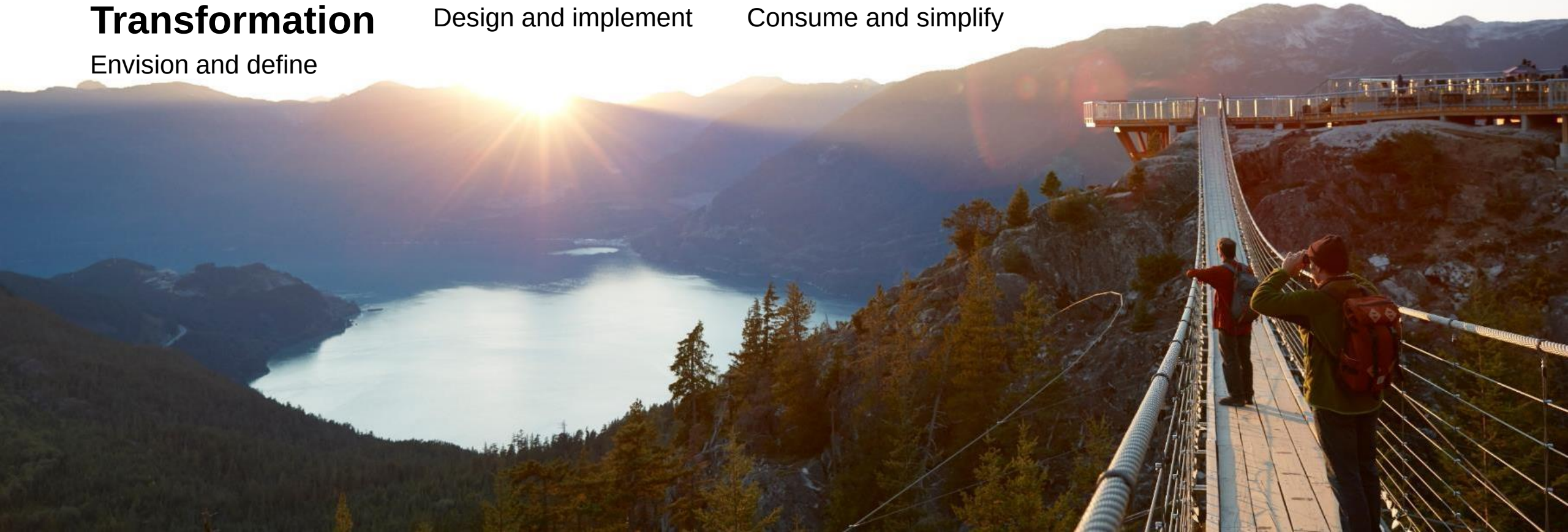
HPE POINTNEXT

We have customers' destinations in sight

Advisory & Transformation
Envision and define

Professional
Design and implement

Operational
Consume and simplify

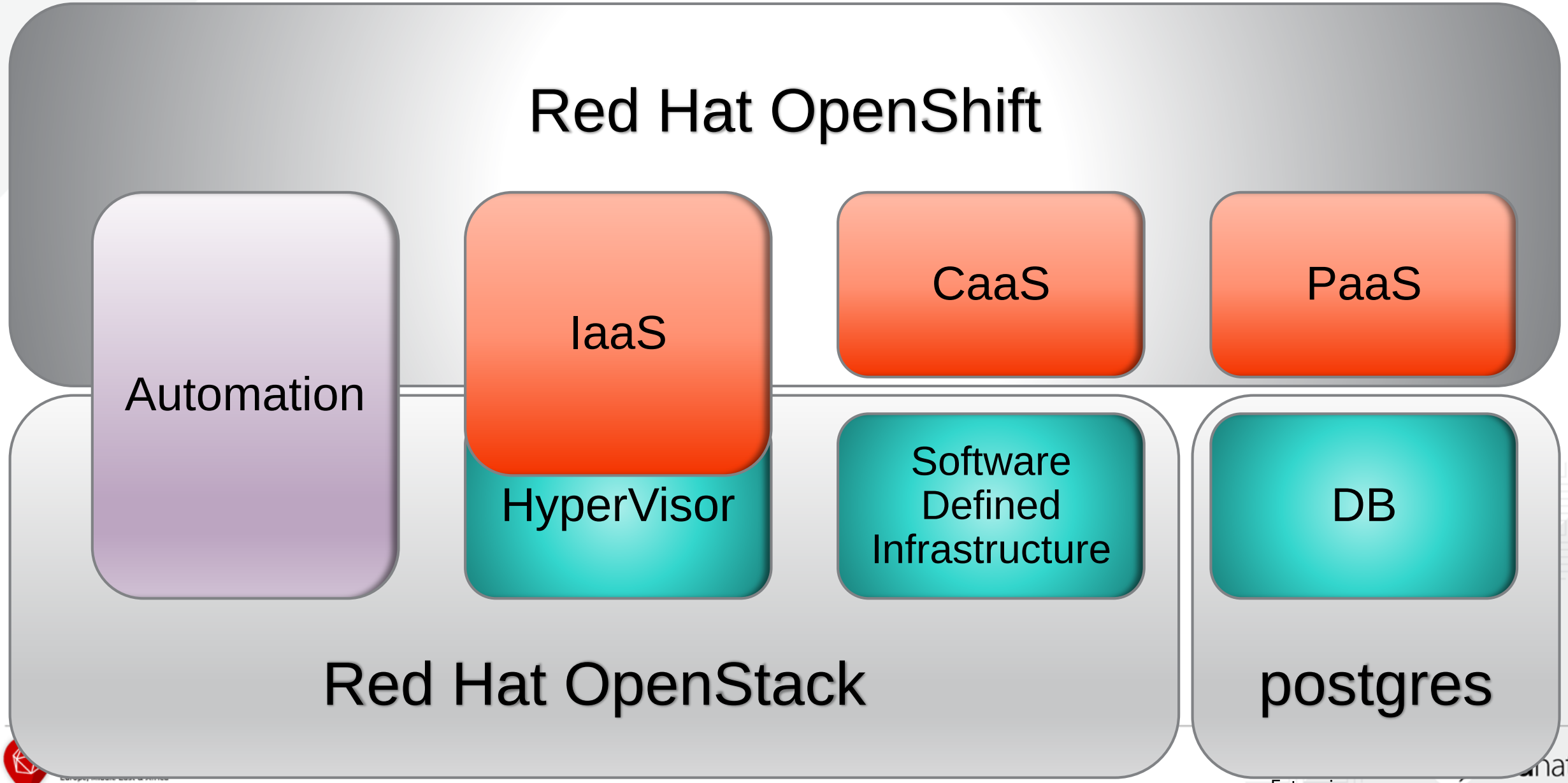


Red Hat & HPE

Red Hat and HPE lead the way in providing open solutions that help you cut costs, reduce complexity, and increase performance for physical, virtual and cloud environment

- 17+ years of collaboration and innovation
- More customers run Red Hat Enterprise Linux on HPE servers than any other platform
- Broadest global services and support for any environment
- 99% resolution of inbound support calls by HPE Pointnext
- Superior support with 4,000+ Linux service professionals
- Superior price and performance across numerous technologies
- Close technical collaboration for superior, mission-critical reliability, availability, and scalability

IT Infrastructure Blocks – In The Open World



Why Enterprise are looking into this

to go

from here

to there

Born in the Cloud

or

Google amazon.com

facebook

New Release deployed in

months

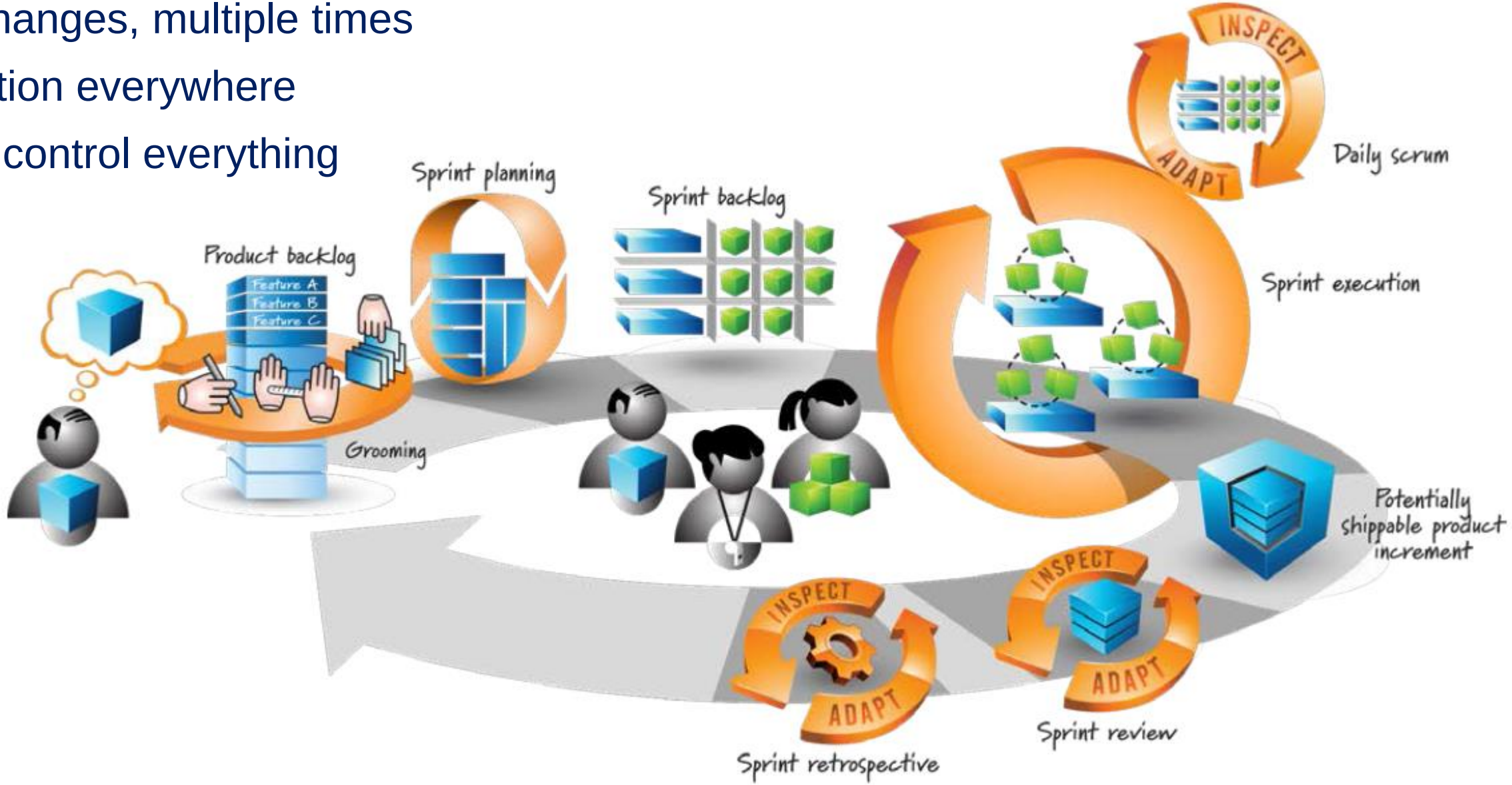
Several code updates

/ day

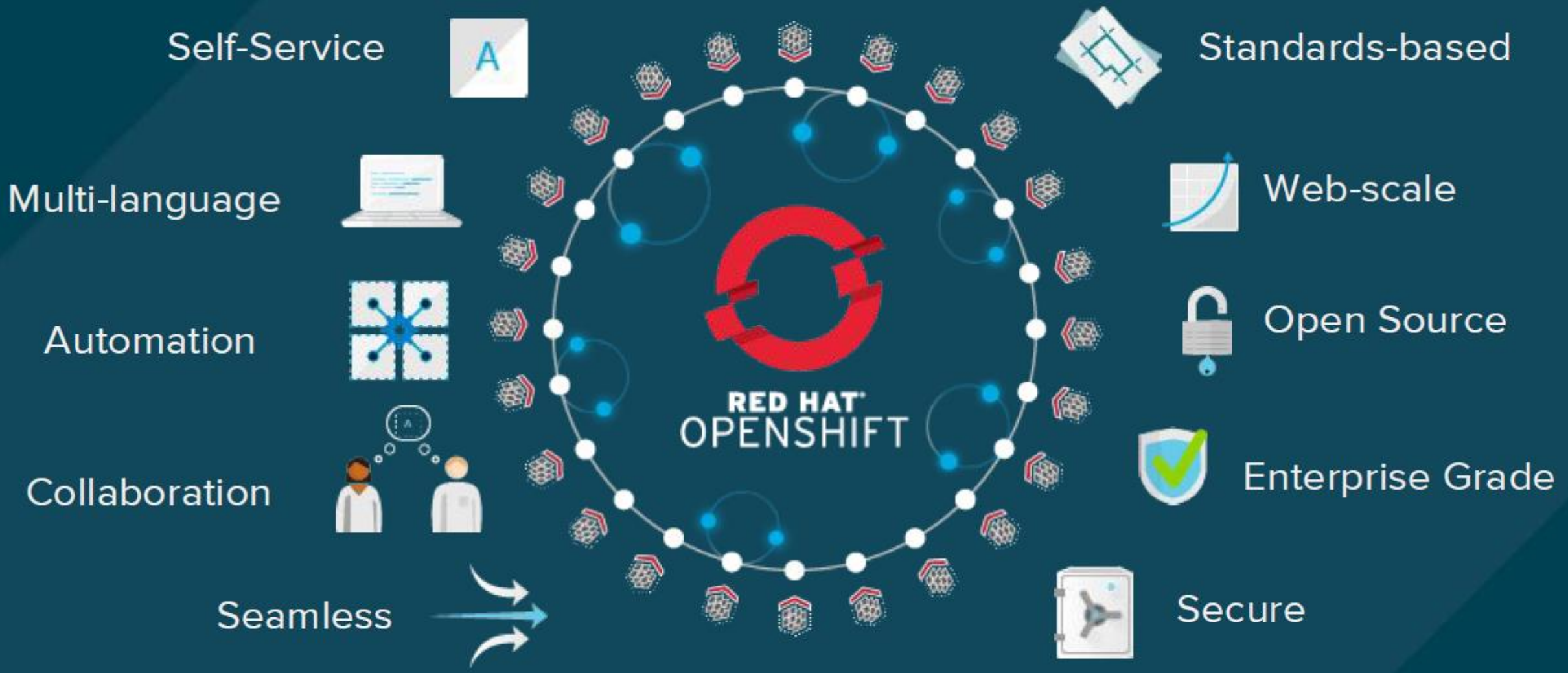
/ hour

DevOps High Level View

- Small changes, multiple times
- Automation everywhere
- Version control everything



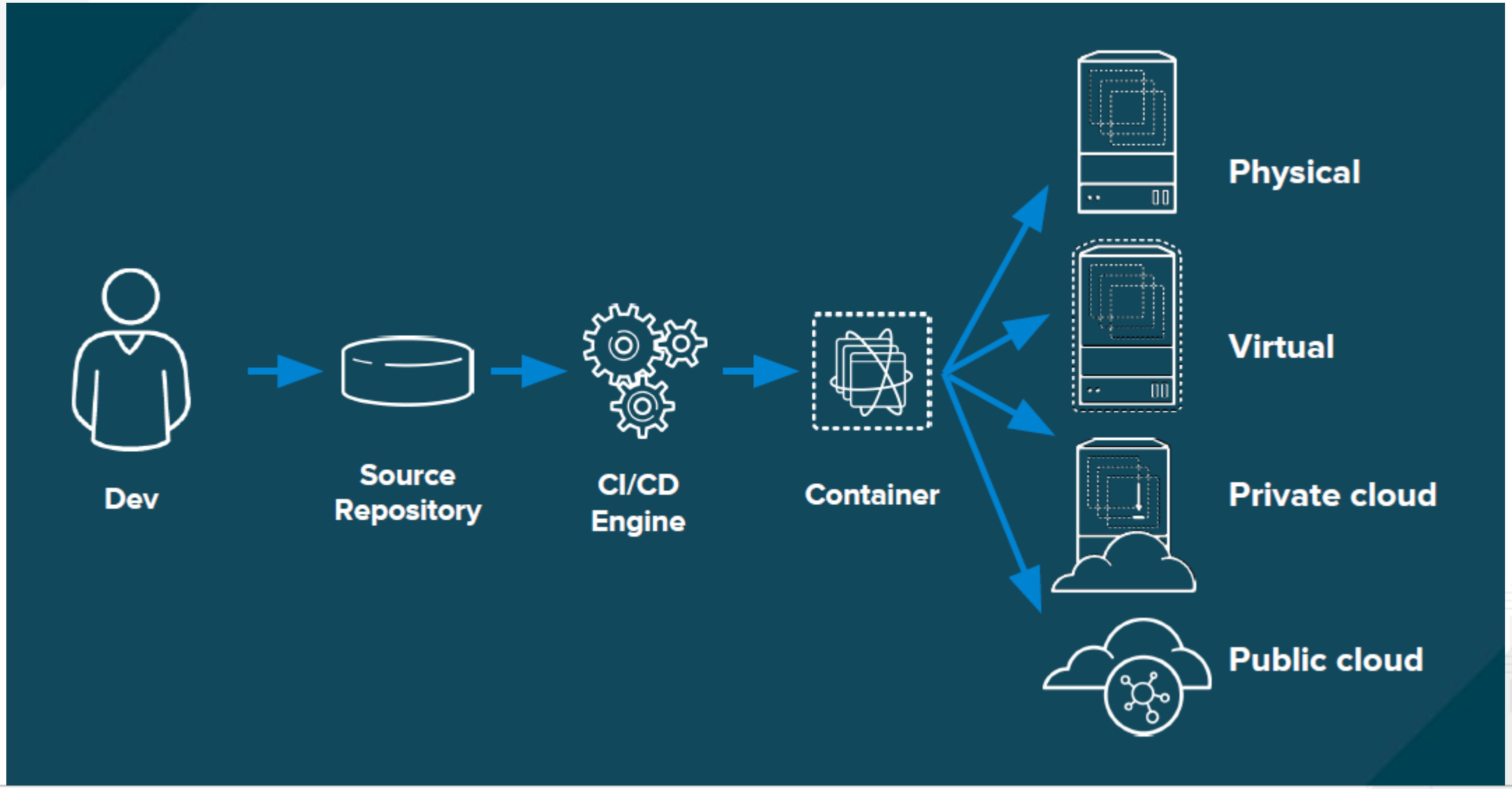
Openshift - Critical features for both Dev and Ops



Based on Docker (Runtime) and Kubernetes (Orchestration)

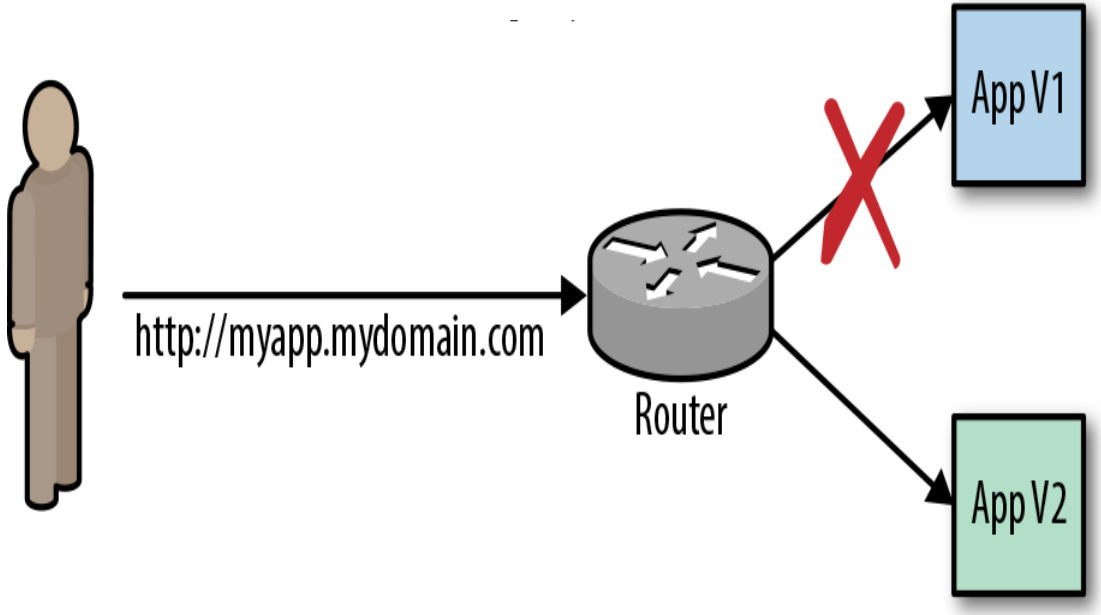
redhat.

DevOps With Containers Across the Hybrid Cloud

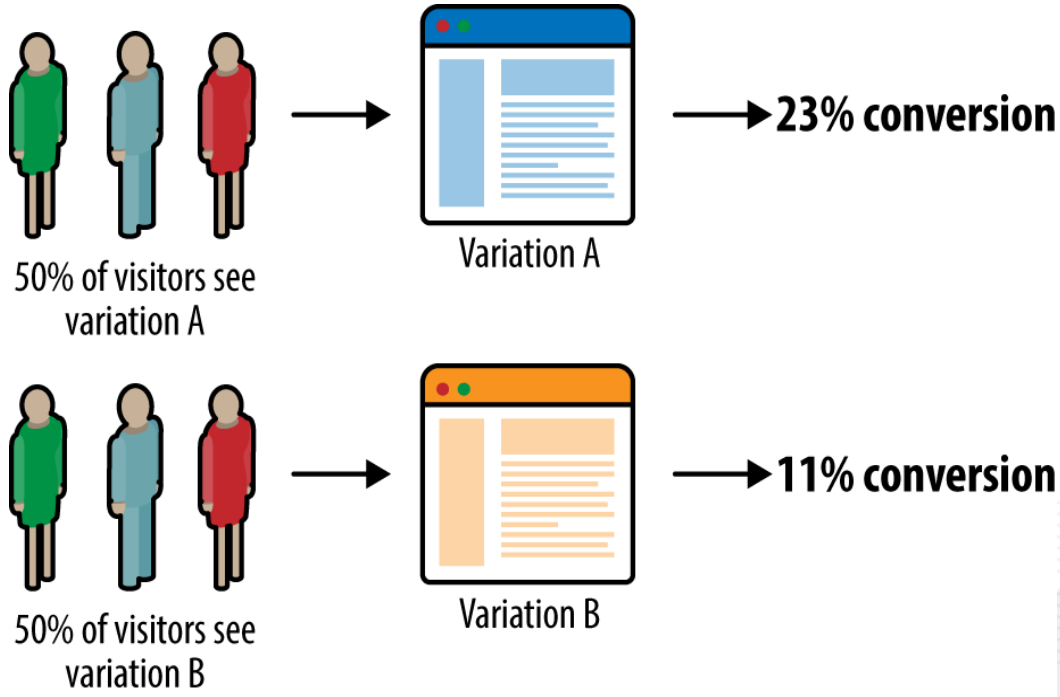


Use Cases

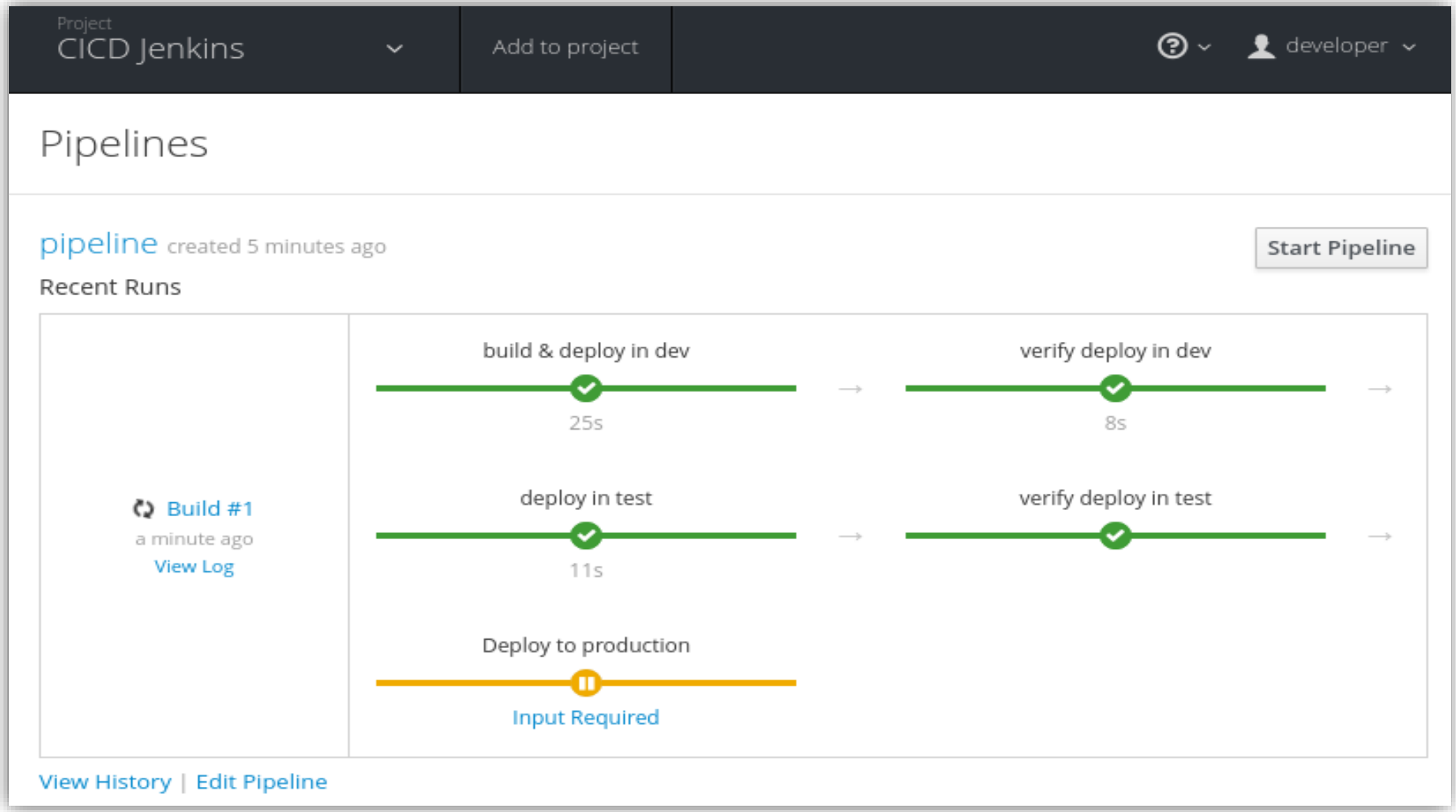
Blue-Green Deployments



A/B Deployments



OpenShift Pipeline



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Monitoring and Auto Scaling

Cluster Quota

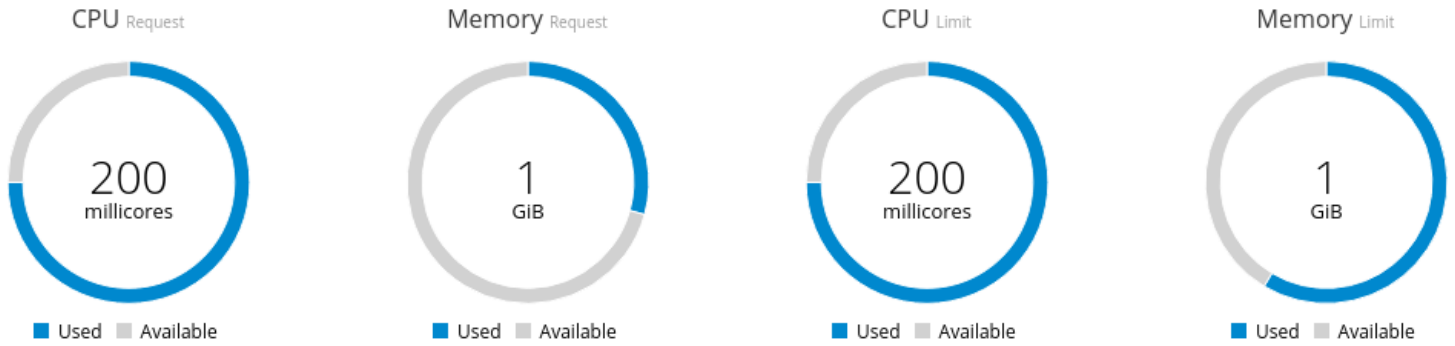
Limits resource usage across a set of projects.

Resource type	Used (this project)	Used (all projects)	Max
Pods	3	3	4

Project Quota

compute-resources

Limits resource usage within this project.



Resource type	Used	Max
CPU (Limit)	150 millicores	200 millicores
Memory (Limit)	600 MiB	1 GiB
Pods	3	4
CPU (Request)	150 millicores	200 millicores
Memory (Request)	300 MiB	1 GiB

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Maximized Value & Performance

HPE PointNext Advisory and Services

RED HAT® VIRTUALIZATION

RED HAT® SATELLITE

RED HAT® CLOUDFORMS

ANSIBLE by Red Hat®

Automation & Management

RED HAT® JBOSS® MIDDLEWARE

RED HAT® ENTERPRISE LINUX®

RED HAT® STORAGE

Virtual Environments

RED HAT® OPENSHIFT Container Platform

PaaS

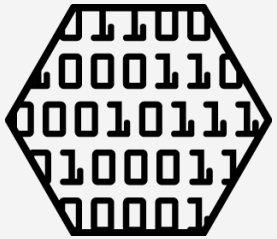
RED HAT® OPENSTACK® PLATFORM

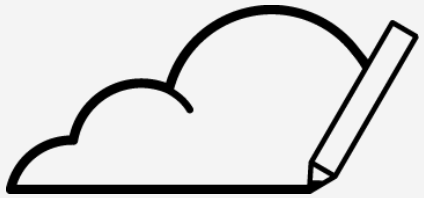
IaaS

Hewlett Packard Enterprise Servers & Cloud Servers

Hewlett Packard Enterprise Network & Storage Infrastructure

HPE and Red Hat Initiatives & Solutions



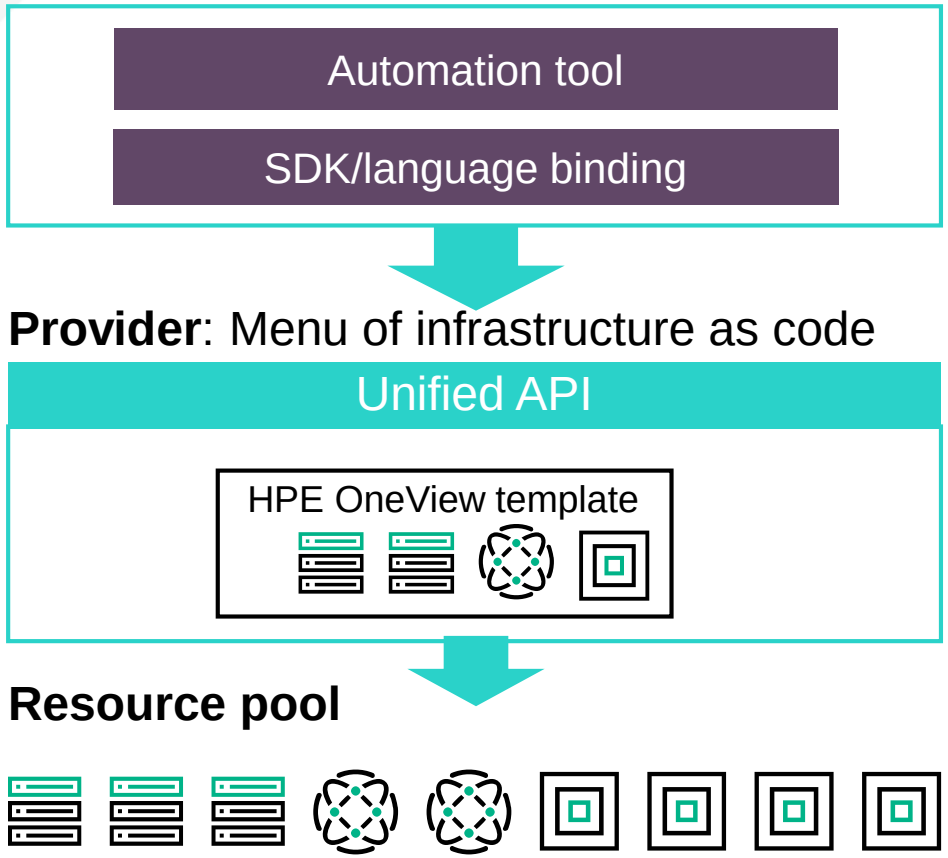


- Mission Critical
- Big Data
- SAP HANA
- Cloud
- NFV/Telco
- Containers & Automation
- Storage

Bringing infrastructure as code to physical infrastructure

Automating infrastructure deployment with HPE OneView

Consumer: Orders resources from the menu



1. Define infrastructure template in HPE OneView
2. Deploy infrastructure with automation tool
3. Provision application with automation tool
4. Done!

Infrastructure as a Code – with HPE OneView

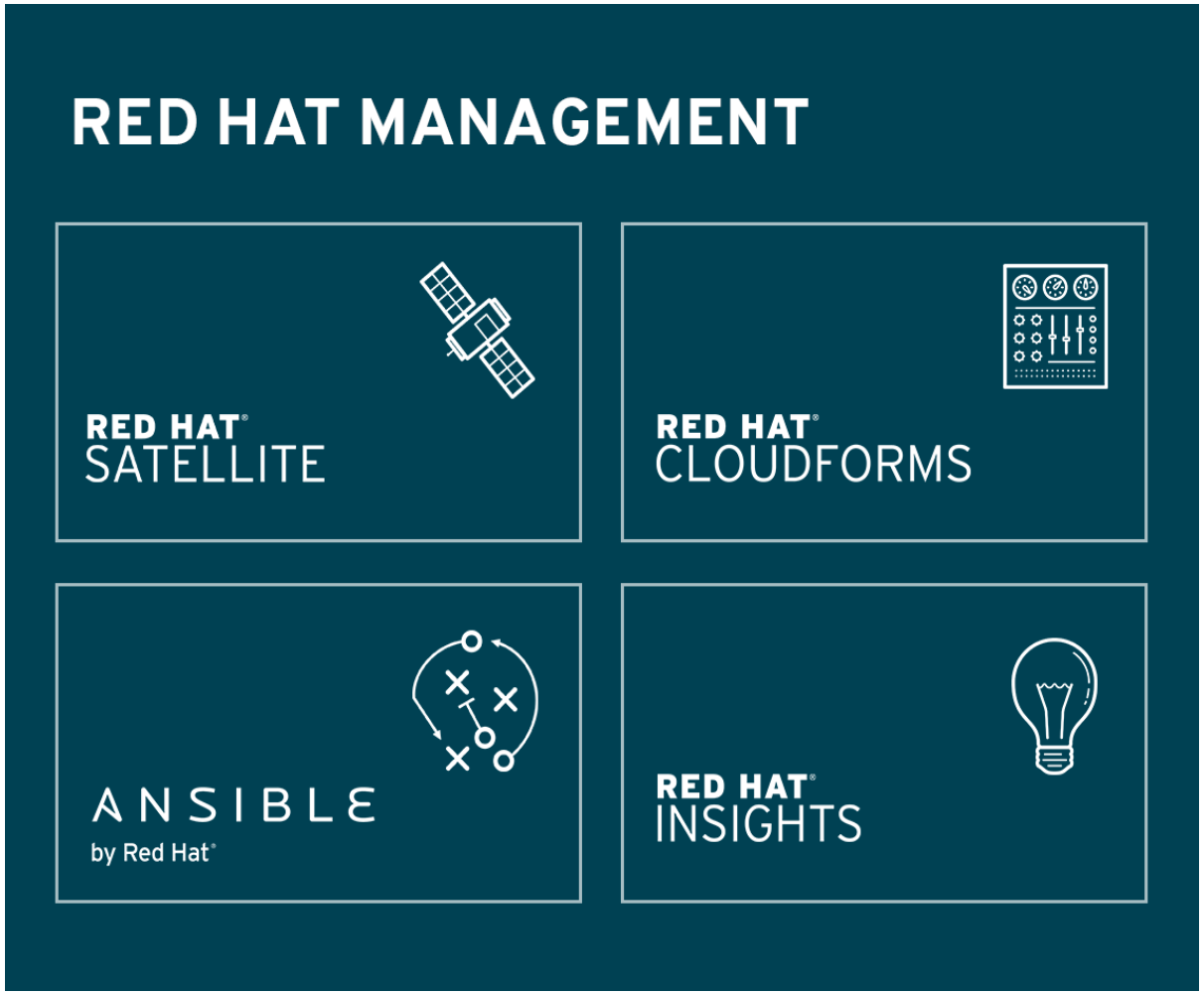
- Manage hardware just as easily as virtual machines
- Apply latest firmware
- Control boot order
- Tweak BIOS settings
- RAID configuration for local disks
- REST API and Ansible modules

Infrastructure as a Code – with HPE OneView

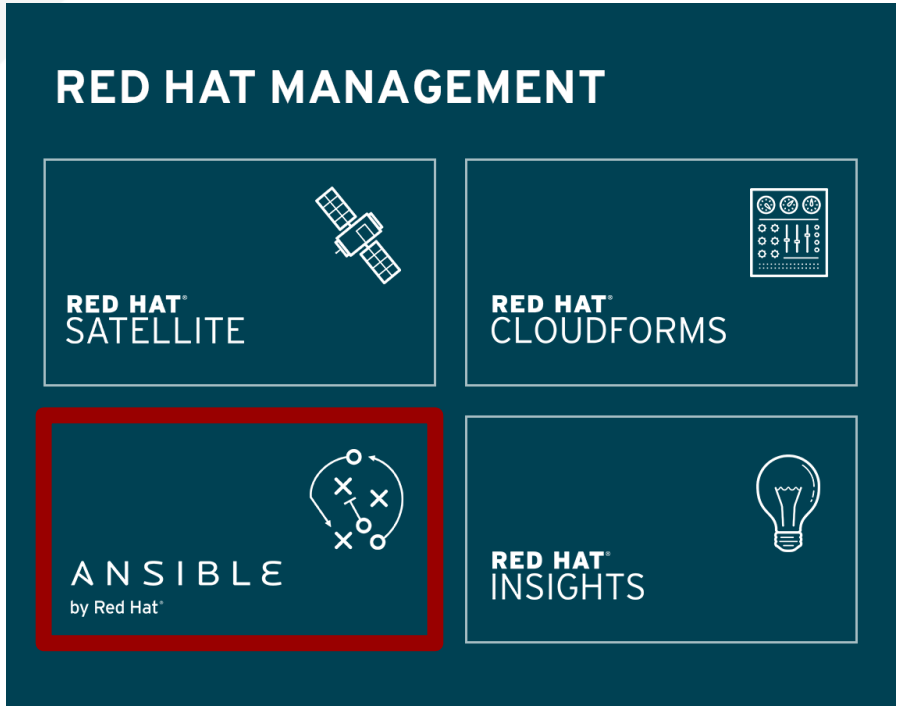
```
- name: create a service profile and assign it to a node
  oneview_server_profile:
    config: "../group_vars/config.json"
    state: present
    data:
      name: "{{ inventory_hostname.split('.').0 }}"
      server_hardware: "{{ ilo_name }}"
      description: "OpenShift Nodes - {{ short_model }}"
      serverHardwareTypeName: "{{ short_model }} 1"
      boot:
        manageBoot: true
        order: ["PXE", "CD", "USB", "HardDisk"]
      bootMode:
        manageMode: true
        mode: "BIOS"
        pxeBootPolicy: null
      bios:
        manageBios: true
        overriddenSettings: "{{ bios_settings }}"
      firmware:
        firmwareBaselineUri: "{{ fw_baseline_uri }}"
        firmwareInstallType: "FirmwareOnlyOfflineMode"
        forceInstallFirmware: false
        manageFirmware: true
  register: output
  delegate_to: localhost
  tags:
  - templates
```

```
- name: add a server to oneview
  oneview_server_hardware:
    config: "../group_vars/config.json"
    state: present
    data:
      hostname: "{{ ilo_ip }}"
      username: "{{ ilo_username }}"
      password: "{{ ilo_passwd }}"
      force: false
      licensingIntent: "OneViewNoiLO"
      configurationState: "Managed"
  register: server_facts_new
  delegate_to: localhost
  tags:
  - mkserver
  when:
  - server_exists == false
```

Achieve your KPIs with management solutions



… with automation



Ansible modules provided by HPE. Example playbooks as open-source

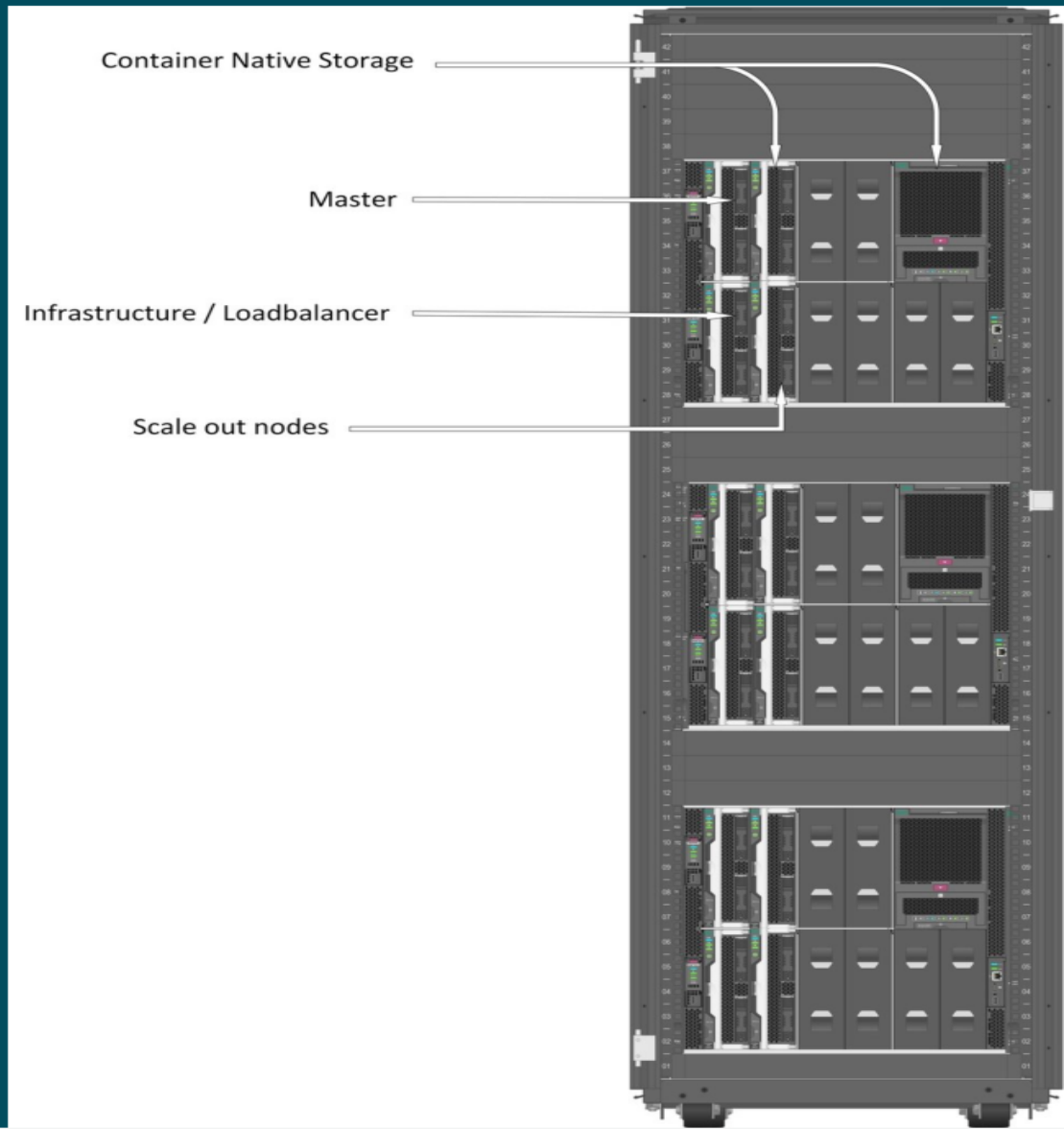
- Automated system provisioning using configuration management
- Set up a SAP (HANA) instance including best practices and tuning within less than 10 min.
- Orchestration enables faster deployment of changes into the production landscape.
- CI/CD and SOE for SAP HANA Infrastructure enables regular security updates in production environment, identical staging / production environments, replace of manual DR strategies
- Bare-Metal-as-a-Service
- Ansible Kick Starter: reduce implementation time e.g. for 6 node HANA scale-out environment from 7 to 3 days

RED HAT OPENSHIFT CONTAINER PLATFORM ON HPE SYNERGY

Reference Architecture describing how to deploy Red Hat OpenShift Container Platform on HPE Synergy

Key Technologies

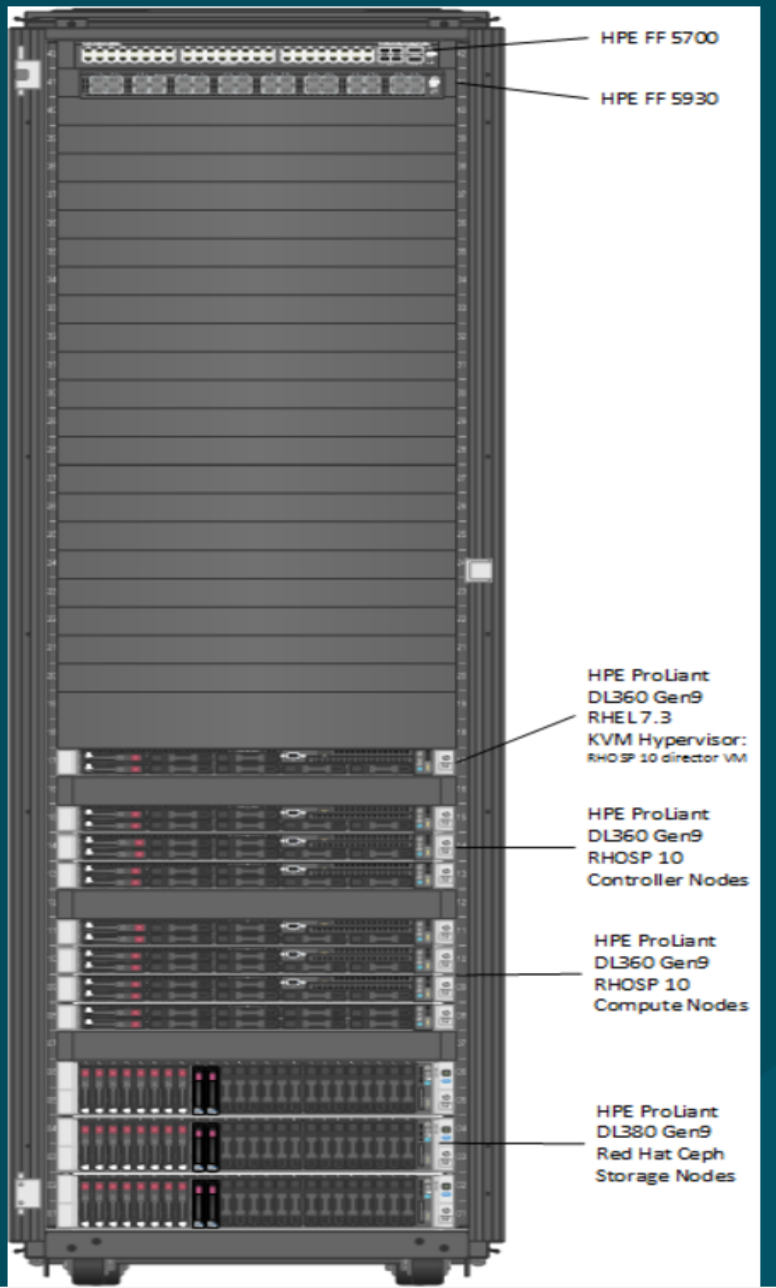
- Red Hat OpenShift Container Platform
- HPE Synergy
- HPE OneView
- Red Hat Enterprise Linux
- Image Streamer
- Ansible Tower and HPE OneView Playbooks
- Red Hat Satellite
- Red Hat Container Native Storage
- Red Hat Cloudforms



RED HAT OPENSTACK PLATFORM 10 ON HPE PROLIANT DL SERVERS

HPE ProLiant DL

- 1 RHEL 7.3 KVM Hypervisor (director)
  - HPE ProLiant DL360 Gen9
  - 2 CPU 64GB RAM
- 3 RHOSP 10 Controller Nodes
  - HPE ProLiant DL360 Gen9
  - 2 CPU 64GB RAM
- 4 RHOSP 10 Compute Nodes
  - HPE ProLiant DL360 Gen9
  - 2 CPU 256GB RAM
- 3 Red Hat Ceph Storage Nodes
  - HPE ProLiant DL380 Gen9
  - 1 CPU 64GB RAM
  - 12 1TB SAS and 2 400GB SSD



Our vision and strategy

A complementary strategy to SAP

Hewlett Packard Enterprise

redhat.

We make **Hybrid IT** simple

Market leading end-to-end mission-critical infrastructure solutions and hybrid cloud consumption options for SAP HANA

SAP S/4 HANA

providing hybrid cloud management with governance and policy based control, enabling e.g. self-service functionalities,chargeback, etc.

We power the **Intelligent Edge**

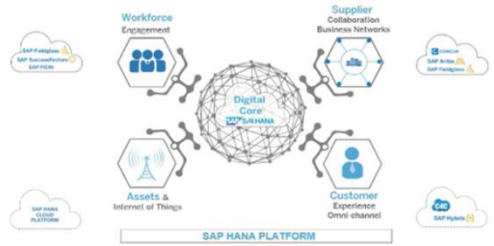
Mission Critical Edgeline server and secure Aruba network solutions to run SAP Leonardo Industrial IoT platform on the Edge

SAP Leonardo

integrating Non-SAP solutions and sources and unlock the value of enterprise data core

We have the **expertise to make it happen**

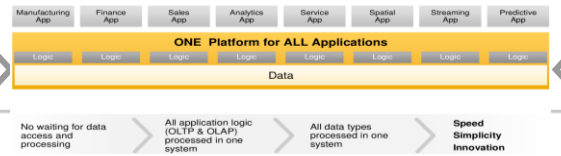
Advise and transform IT to realize new S/4HANA business processes. Design and implement SAP ERP and S/4HANA. Operate and support all SAP solutions



streamline development, modernization and delivery of SAP extensions with container technology and microservices

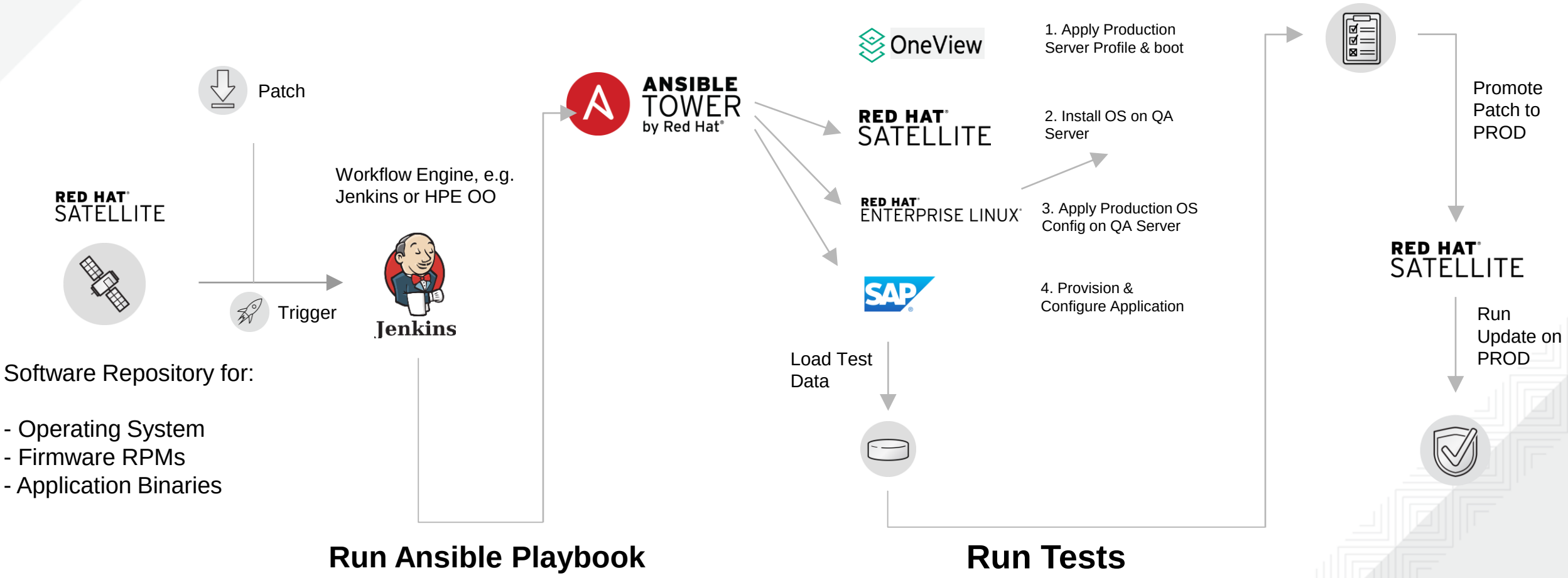
We make the **Datacenter** efficient

.....



automate manual tasks and speed up deployment and changes. Avoid errors and downtime with predictive analytics

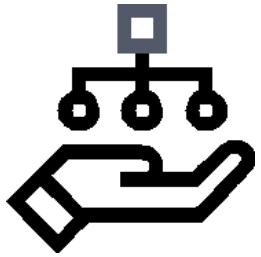
Use Case: reduce risk of patching SAP landscapes



Red Hat from HPE - Superior Support

One stop

One purchase order, one call for technical support, and updates on both software and hardware

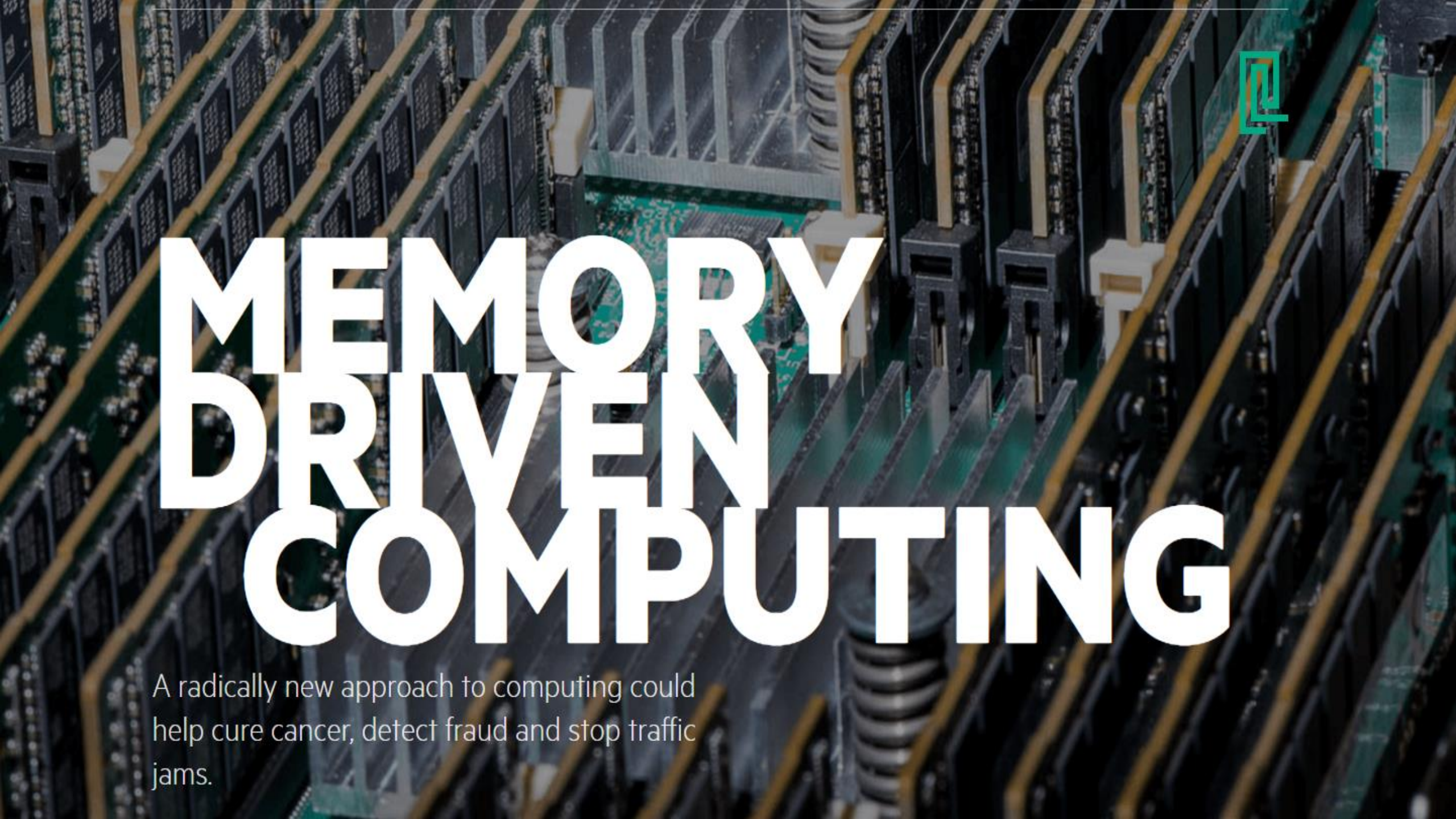


Expert answers

17+ years of technical expertise for fast answers and problem resolution from more than 4,000 Linux professionals

Global reach

Consistent service experience giving customers global expertise locally (in 170 countries)



MEMORY DRIVEN COMPUTING

A radically new approach to computing could help cure cancer, detect fraud and stop traffic jams.

HPE Superdome Flex Server

help cure cancer, detect fraud and stop traffic jams.

RED HAT
FORUM
Europe, Middle East & Africa

redhat.

Thank You

yaki@hpe.com