# ADDRESSING COMMON TRANSFORMATION CHALLENGES:

## RED HAT INFRASTRUCTURE MIGRATION SOLUTION

Karl Stevens

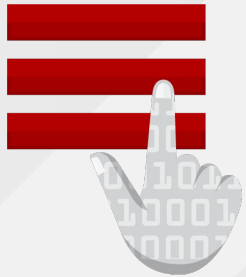
Business Development Manager - Virtualisation

October 9th, 2018

# TRENDS IN DIGITAL TRANSFORMATION

**87%**

anticipate that their industries **will be disrupted by digital trends** to a great or moderate extent.[1]



**77%**

say that **technology is one of the top 3 influencers** transforming stakeholder expectations for the business.[2]

**16% to 37%**

CIOs expect digital revenue to grow from 16 to 37 percent in the next 5 years.[3]

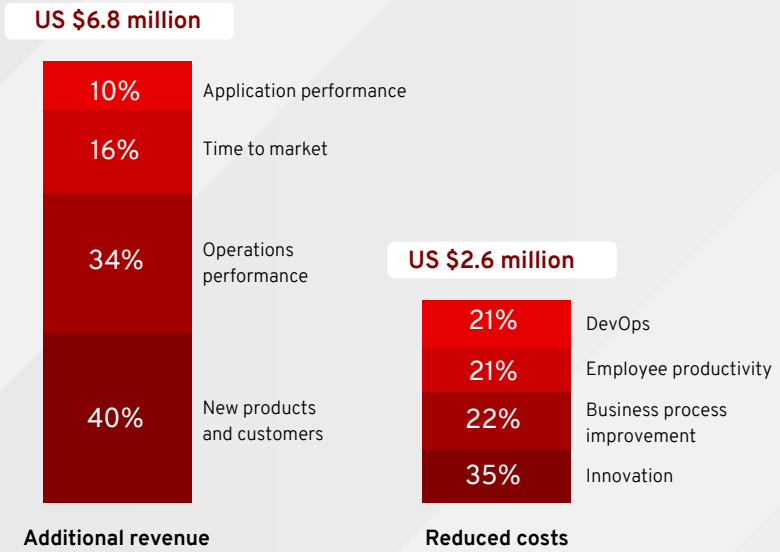
**Source 1:** MIT Sloan Management Review and Deloitte, Aligning the Organization for Its Digital Future, July 2016. http://sloanreview.mit.edu/projects/aligning-for-digital-future/
**Source 2:** Survey of 1,409 CEOs in 83 countries by PricewaterhouseCooper, 19th Annual Global CEO Survey, January 2016. http://www.pwc.com/gx/en/ceo-survey/2016/landing-page/pwc-19th-annual-global-ceo-survey.pdf
**Source 3:** CIO Survey (n=609), 2,944 CIOs in 84 countries. Graphic created by Red Hat based on Gartner research. Building the Digital Platform: The 2016 CIO Agenda, Published: 02 October 2015. http://www.gartner.com/imagesrv/cio/pdf/cio_agenda_insights_2016.pdf

# BENEFITS OF DIGITAL TRANSFORMATION

## From cloud native application development

### BUSINESS OUTCOMES KPI GAINS

### ANNUAL BENEFITS PER CLOUD APPLICATION




**Source:** IDC, Business Value Impact of Digital Transformation: Understanding How Digital Transformation Is Already Here and What It Means For Your Sales and Marketing Strategy, Doc # DR2017_BS2_NS_RP. February 2017.

# DIGITAL TRANSFORMATION

"The accelerating **transformation** of business activities, processes and competencies to fully leverage the opportunities of **digital** technologies and automation."

# EXAMPLES OF DIGITAL TRANSFORMATION

## Sped Up..

digital transactions, ultimately delivering faster, better financial services for customers.

## Maximised..

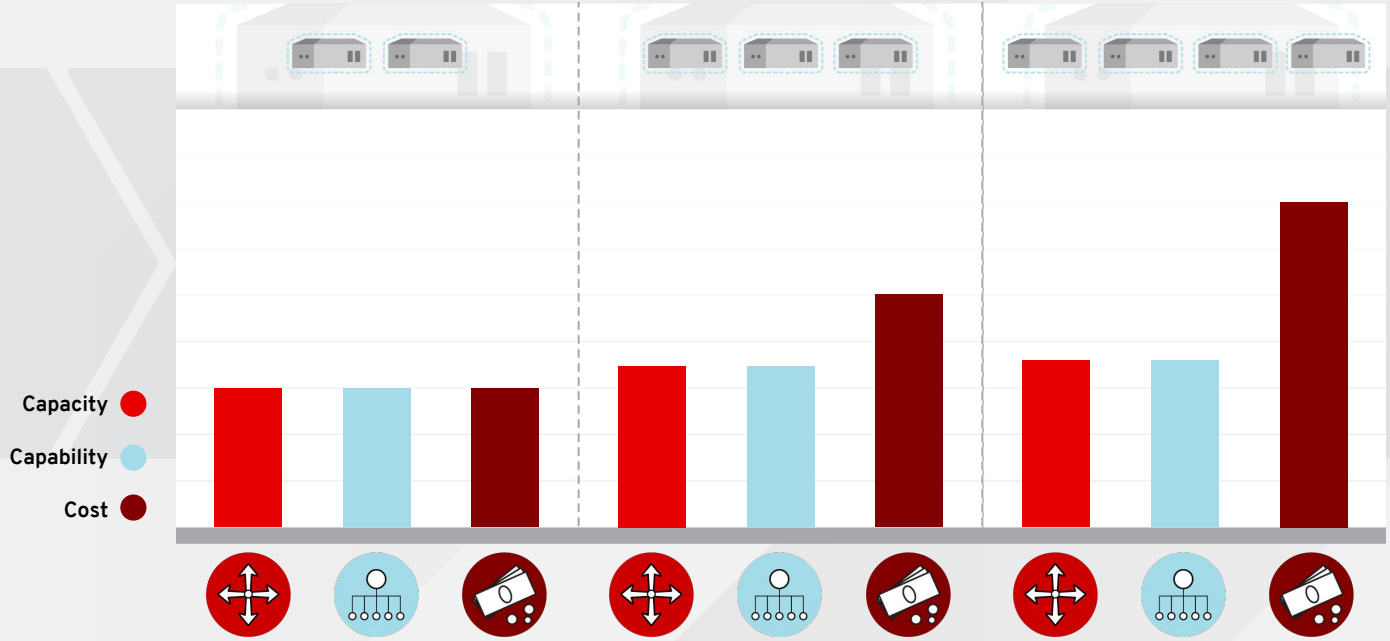
efficiency and reduced hardware footprint. High speed provisioning delivers in minutes instead of weeks, thanks to the agility of Red Hat Virtualization and unified management

## Improved..

competitiveness, and customer satisfaction through improved time to market, by streamlining the flow of exciting new products

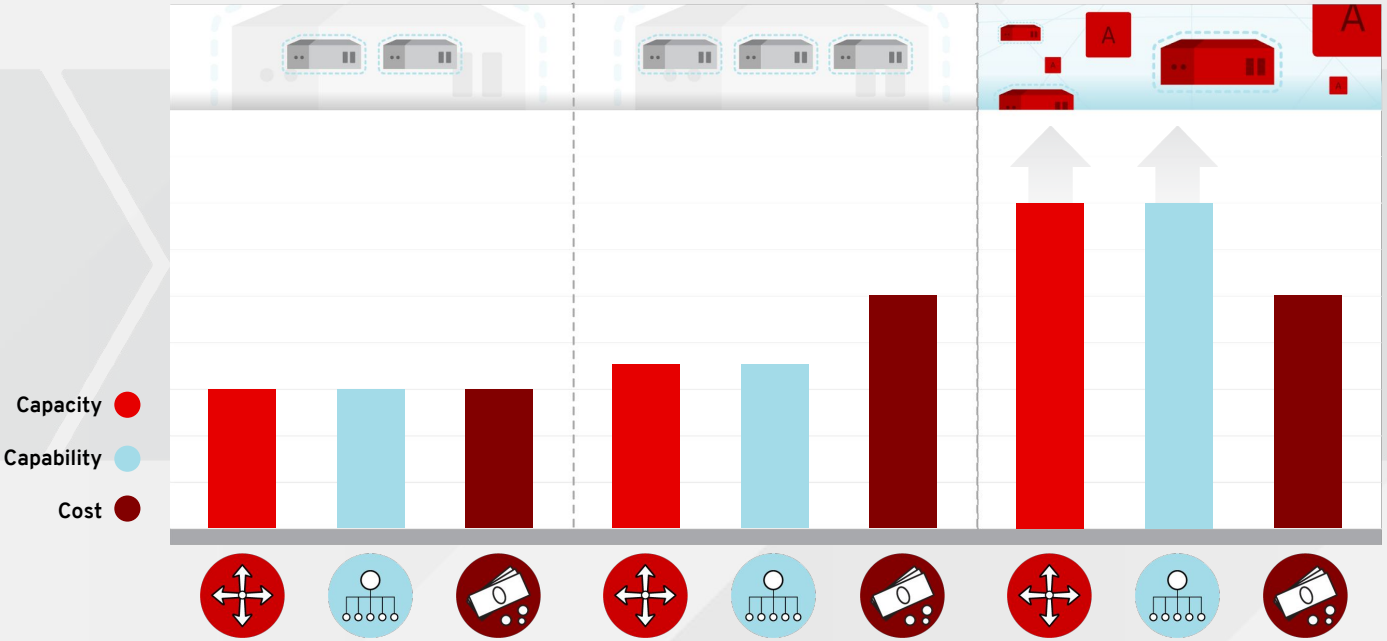
# STATUS QUO

Continually increasing costs, limited capacity, virtual machine only

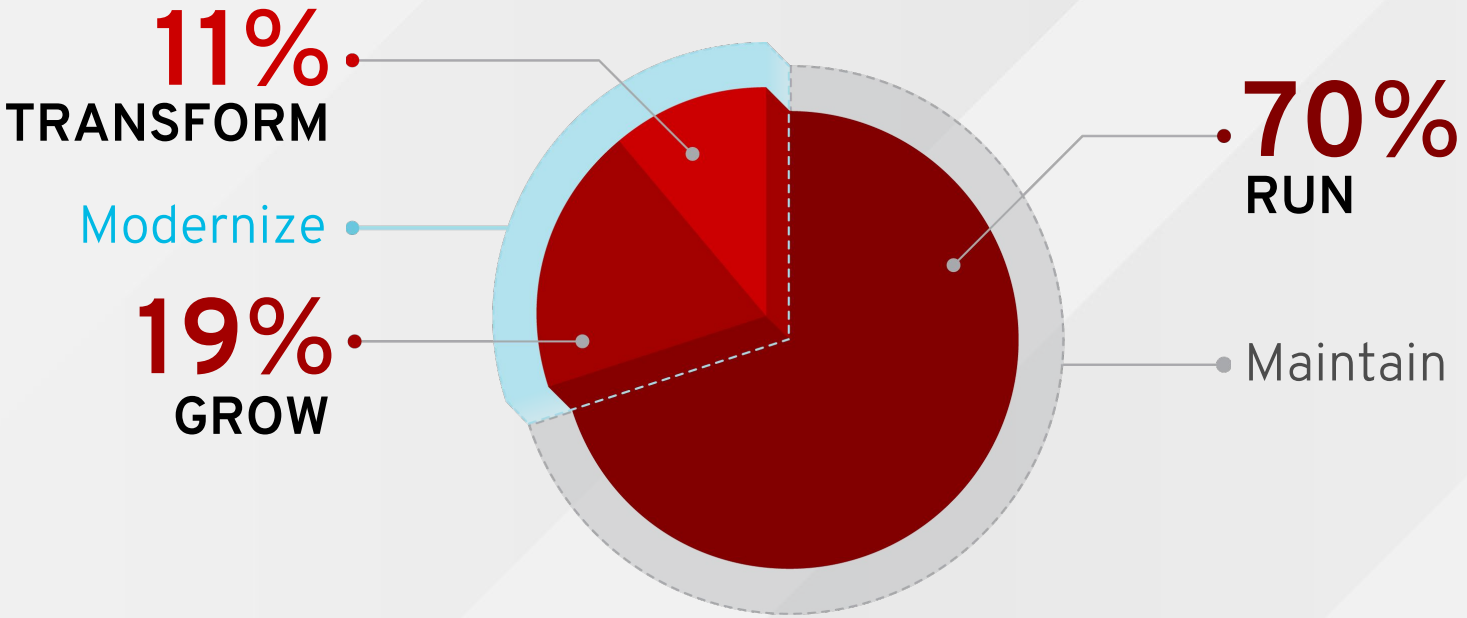


# MODERNIZE AND MIGRATE

## Decrease cost, increase capacity, embrace containers

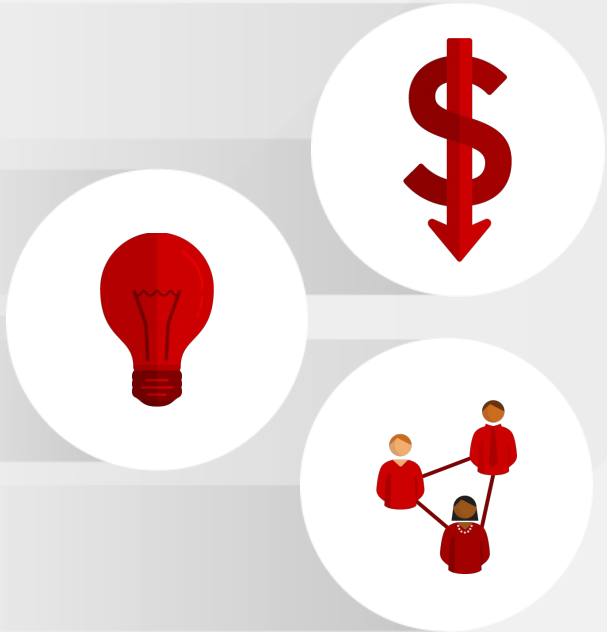


# MAINTAIN AND MODERNIZE




**Source:** Graph created by Red Hat based on Gartner research. Potter, Kurt, Sanil Solanki, and Ken McGee, Run, Grow and Transform the Business IT Spending: Approaches to Categorization and Interpretation. Gartner G00308477, 27 June 2016

# INFRASTRUCTURE MIGRATION



## Invest in Transformation

1. Best platform for the future; PLUS
2. Re-invest savings into transformation initiatives, such as management, automation, or containers.

## Cost savings

Typical cost savings of 40-50% over 3 years over long-term commitments with proprietary virtualization.

## Proven methodology

Proven methodology to architect, automate, and execute large-scale, mission critical workload migrations.

**Source:** Graph created by Red Hat based on Gartner research. Potter, Kurt, Sanil Solanki, and Ken McGee, Run, Grow and Transform the Business IT Spending: Approaches to Categorization and Interpretation. Gartner G00308477, 27 June 2016

# INFRASTRUCTURE MIGRATION STRATEGY

## Three aspects to successful migration

### Planning and platform setup

- Define approach and architecture
- Operationalize alternative platform
- Identify and characterize VMs for migration

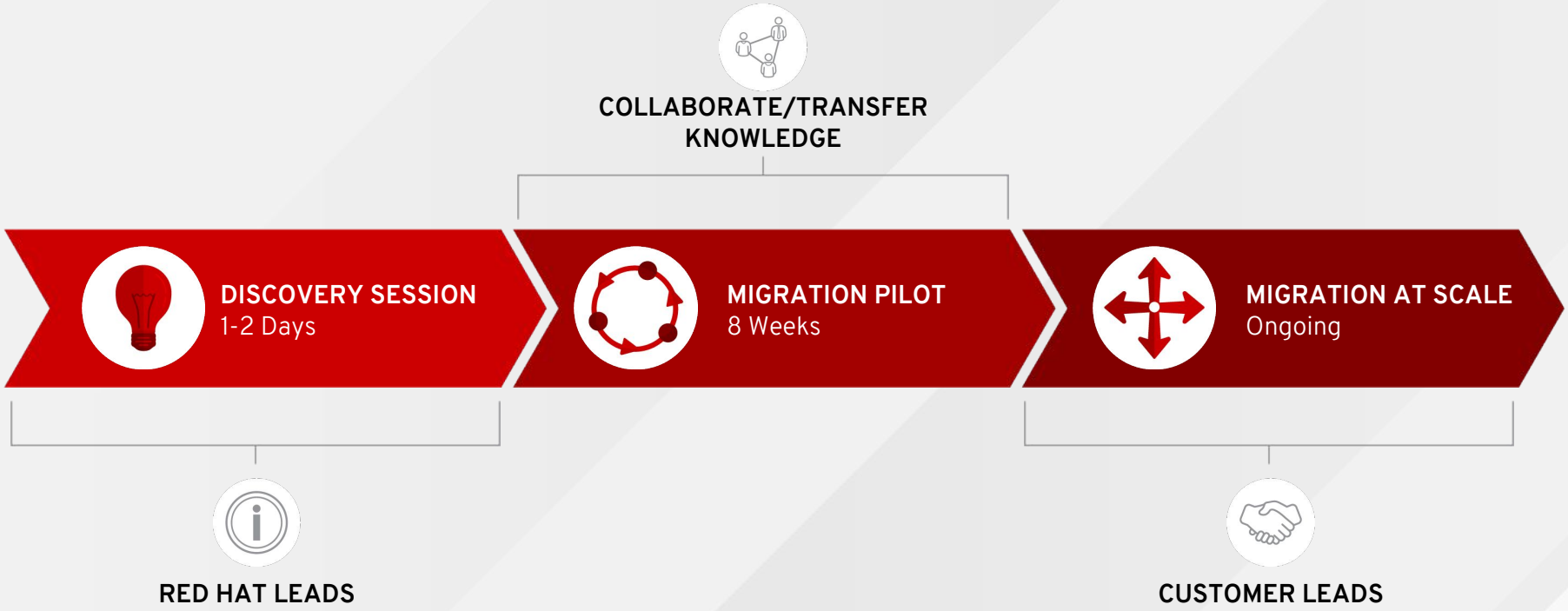
### Migration tooling and approach

- Jointly develop comprehensive tooling and approach for migrating workloads with key stakeholders to ensure success

### Migration execution

- Validate and refine migration approach
- Pilot migration of a representative set of workloads
- Set the stage to migrate thousands of workloads with a strategic approach and proven tools

# MIGRATION JOURNEY



# MIGRATION JOURNEY

**DISCOVERY SESSION**
1-2 Days

**MIGRATION PILOT**
8 Weeks

**MIGRATION AT SCALE**
Ongoing

## OUTCOMES

- High-level architecture
- High-level migration approach

## CUSTOMER PARTICIPANTS

- Budget sponsor
- Virtualization lead
- Application owners
- Change managers

## RED HAT PARTICIPANTS

- Architect
- Principal consultant
- Services manager

# MIGRATION JOURNEY

DISCOVERY SESSION
1-2 Days

**MIGRATION PILOT**
8 Weeks

MIGRATION AT SCALE
Ongoing

## OUTCOMES

- Alternative platform and migration framework established
- VMs cataloged and prioritized
- Migration approach defined and tested
- Customer-led migration validated

## CUSTOMER PARTICIPANTS

- Virtualization lead
- Migration team

## RED HAT PARTICIPANTS

- Architect
- Principal consultant
- Project manager

# MIGRATION JOURNEY

DISCOVERY SESSION
1-2 Days

MIGRATION PILOT
8 Weeks

**MIGRATION AT SCALE**
Ongoing

## OUTCOMES

- Alternative platform operational and ongoing capability to migrate work loads established

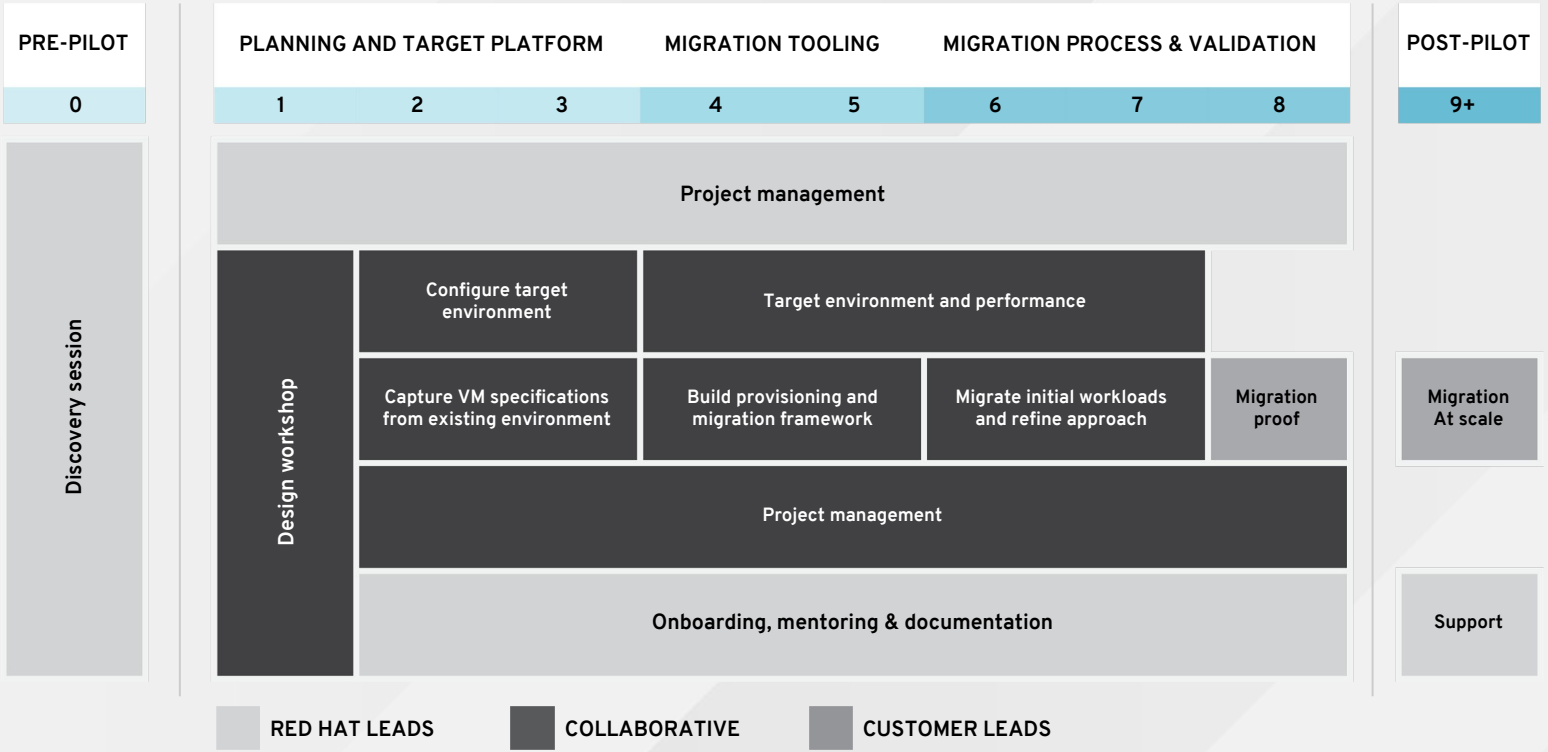
## CUSTOMER PARTICIPANTS

- Ongoing support and maintenance by customer's operations team

## RED HAT PARTICIPANTS

- Red Hat Customer Experience and Engagement - customer support as needed

# TYPICAL MIGRATION PILOT



Intermountain® Healthcare

**REDUCED COST**
AND INVESTED IN
**DIGITAL TRANSFORMATION**

Details and Video Online

**INDUSTRY**
Healthcare

**SIZE**
22 Hospitals and 1400 physicians at 185 clinics.

**EXISTING INFRASTRUCTURE**
1700 virtual machines on VMware vSphere

**MIGRATION**
CloudForms + Ansible to migrate to Red Hat Virtualization

**PROBLEM**
Enterprise License Agreement (ELA) posed significant price increases with little additional value.

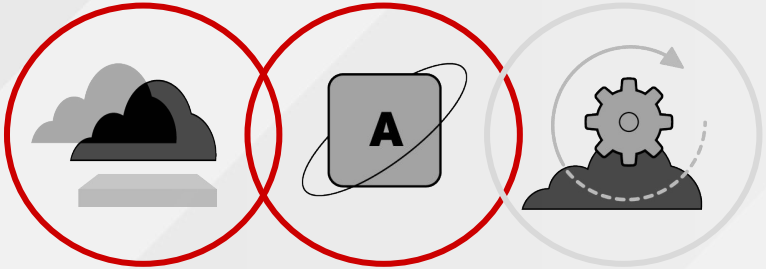
“As we look to the future, it was imperative that we be able to bring IT automation to all aspects of our business, and that our infrastructure was flexible enough to do so. After many considerations, an open source environment was the best option to support our needs. Red Hat has helped us in this transition, providing solutions with an automation -centric approach in mind that have helped to streamline operations and cut costs.”

**BRET LAWSON**
DIRECTOR
INFRASTRUCTURE & OPERATIONS INTERMOUNTAIN HEALTHCARE

# The Future of Virtualisation

# RED HAT OPENSHIFT VISION

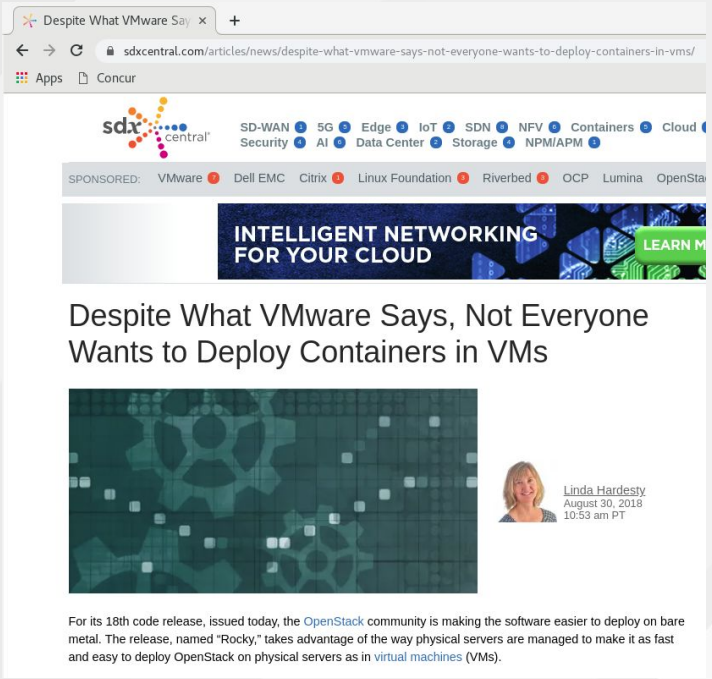
THE KUBERNETES PLATFORM
FOR BIG IDEAS




RED HAT® OPENSHIFT Container Platform

ENTERPRISE KUBERNETES FOR
HYBRID AND MULTI-CLOUD

# BACK TO BARE METAL



Despite What VMware Say

sdxcentral.com/articles/news/despite-what-vmware-says-not-everyone-wants-to-deploy-containers-in-vms/

Apps Concur

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INTELLIGENT NETWORKING FOR YOUR CLOUD

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## Despite What VMware Says, Not Everyone Wants to Deploy Containers in VMs

Linda Hardesty
August 30, 2018
10:53 am PT

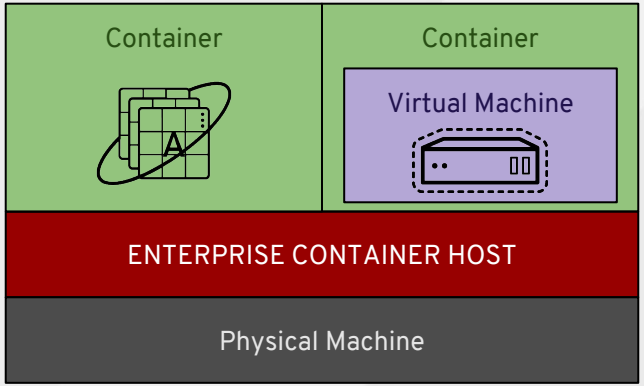
For its 18th code release, issued today, the OpenStack community is making the software easier to deploy on bare metal. The release, named "Rocky," takes advantage of the way physical servers are managed to make it as fast and easy to deploy OpenStack on physical servers as in virtual machines (VMs).

# WHAT IS CONTAINER-NATIVE VIRTUALIZATION?

Add virtual machines to your OpenShift projects directly from the service catalog!
Easily leverage existing VM-based services from your new workloads!

# LEVERAGE EXISTING ECOSYSTEMS

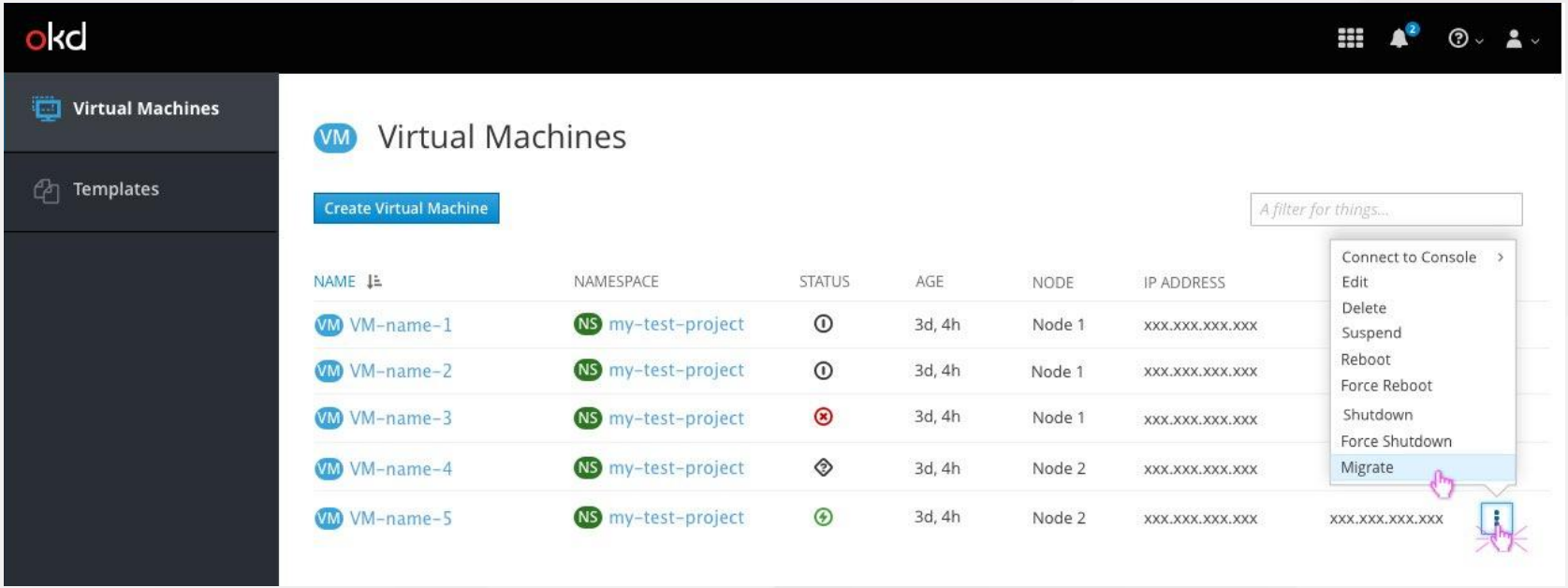
RED HAT® OPENSTACK® PLATFORM




RED HAT® OPENSHIFT

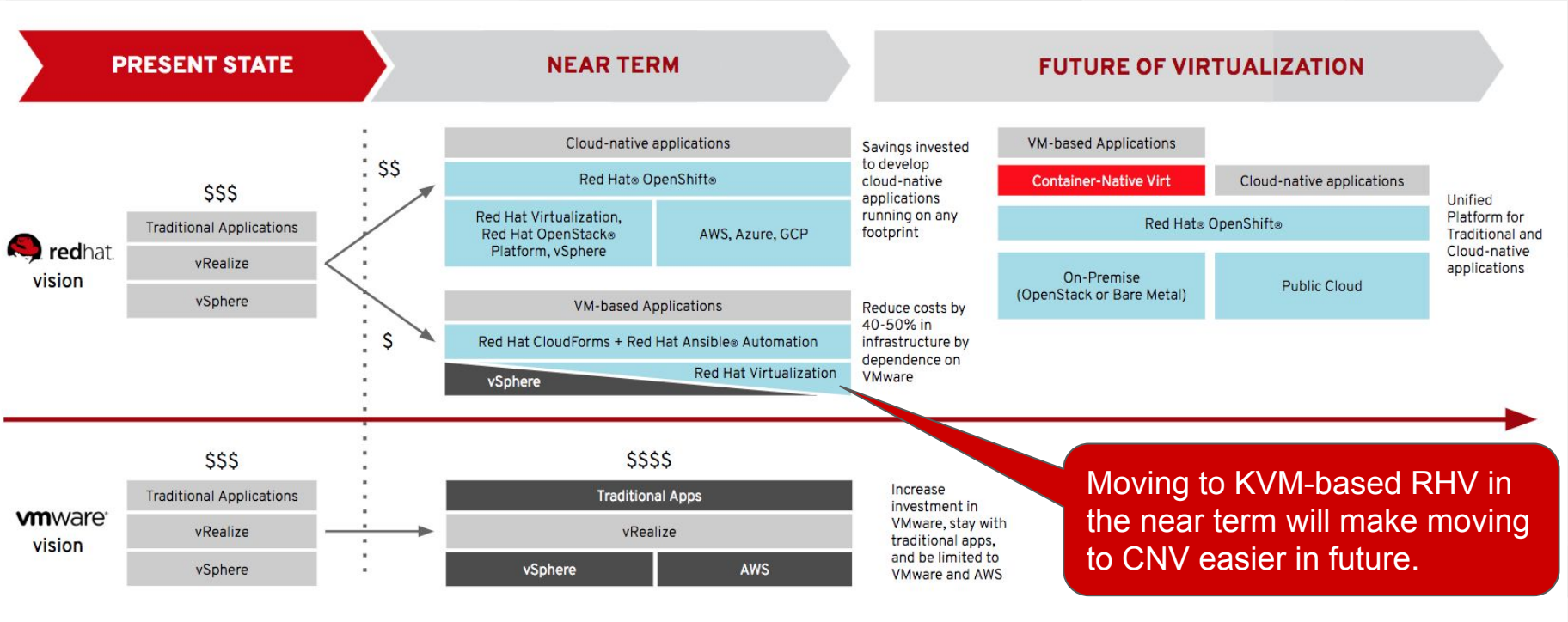
VMw reside with application pods, and use native OpenShift Primed storage solutions or existing ecosystem of 80+ battle tested drivers via Container Storage Interface (CSI).

# CONTAINER-NATIVE VIRTUALIZATION




Leverages tried and trusted RHEL & RHV (KVM) virtualization capabilities.

**Technology Preview access in an upcoming release of OpenShift.**


PRESENT STATE
NEAR TERM
FUTURE OF VIRTUALIZATION
redhat vision
$$$
Traditional Applications
vRealize
vSphere
$$
$
Cloud-native applications
Red Hat® OpenShift®
Red Hat Virtualization, Red Hat OpenStack® Platform, vSphere
AWS, Azure, GCP
VM-based Applications
Red Hat CloudForms + Red Hat Ansible® Automation
vSphere
Red Hat Virtualization
Savings invested to develop cloud-native applications running on any footprint
Reduce costs by 40-50% in infrastructure by dependence on VMware
VM-based Applications
Container-Native Virt
Cloud-native applications
Red Hat® OpenShift®
On-Premise (OpenStack or Bare Metal)
Public Cloud
Unified Platform for Traditional and Cloud-native applications
vmware vision
$$$
Traditional Applications
vRealize
vSphere
$$$$
Traditional Apps
vRealize
vSphere
AWS
Increase investment in VMware, stay with traditional apps, and be limited to VMware and AWS
Moving to KVM-based RHV in the near term will make moving to CNV easier in future.

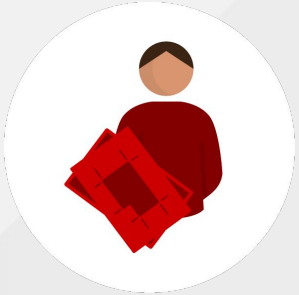
# DISCOVERY SESSION

## REVIEW

and capture infrastructure requirements, processes, workload, and environment details of existing infrastructure.

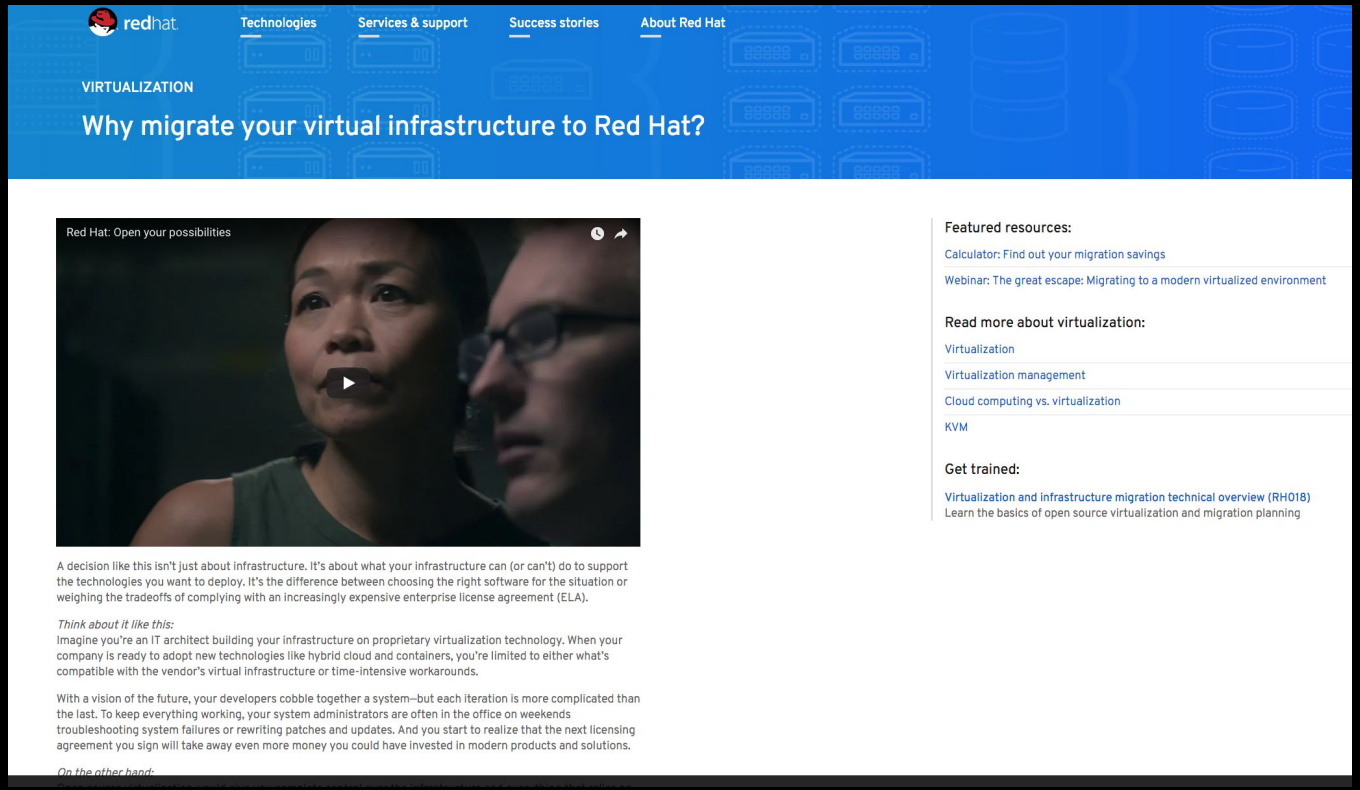
## TRANSLATE

captured requirements to alternative infrastructure.



## GENERATE

thorough plan for setup and ongoing operations of alternative infrastructure including required personnel training and investment.




https://red.ht/possibilities

redhat.

# THANK YOU

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