



# Unlock your VMs ... and your budget.

RED HAT INFRASTRUCTURE MIGRATION SOLUTION

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Solution Owner - Red Hat

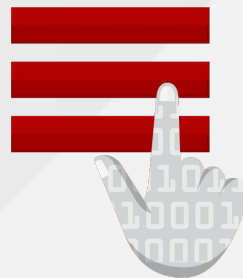
2018-09-14

# TRENDS IN DIGITAL TRANSFORMATION



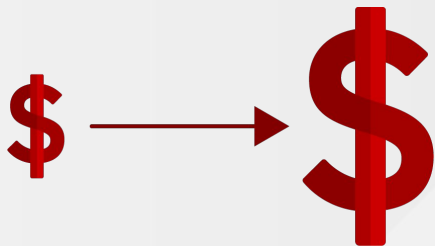
**87%**

anticipate that their industries will be disrupted by digital trends to a great or moderate extent.<sup>1</sup>



**77%**

say that **technology is one of the top 3 influencers** transforming stakeholder expectations for the business.<sup>2</sup>



**16% to 37%**

CIOs expect digital revenue to grow from 16 to 37 percent in the next 5 years.<sup>3</sup>

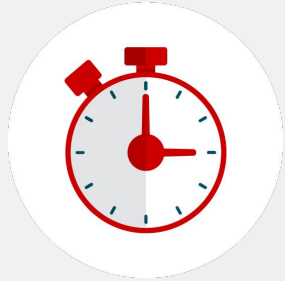
Source 1: MIT Sloan Management Review and Deloitte, Aligning the Organization for Its Digital Future, July 2016. <http://sloanreview.mit.edu/projects/aligning-for-digital-future/>

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](http://www.gartner.com/imagesrv/cio/pdf/cio_agenda_insights_2016.pdf)

# TRENDS IN DIGITAL TRANSFORMATION

From devops processes and technologies



**22%**

less time  
on unplanned work  
and rework



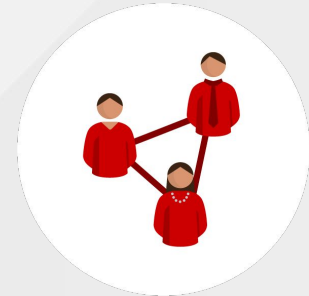
**50%**

less time  
remediating security  
issues



**29%**

more time  
on new work



**22X**

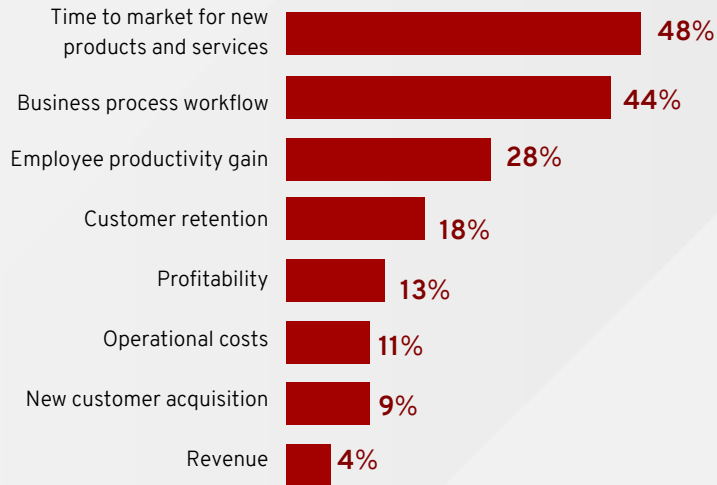
more likely  
for employees to  
recommend their  
organization to a friend

Source: Puppet + DORA, 2016 State of DevOps Report. March 2016. [http://www.ciosummits.com/Online\\_Assets\\_Puppet\\_2016\\_State\\_of\\_DevOps\\_Report.pdf](http://www.ciosummits.com/Online_Assets_Puppet_2016_State_of_DevOps_Report.pdf)

# BENEFITS OF DIGITAL TRANSFORMATION

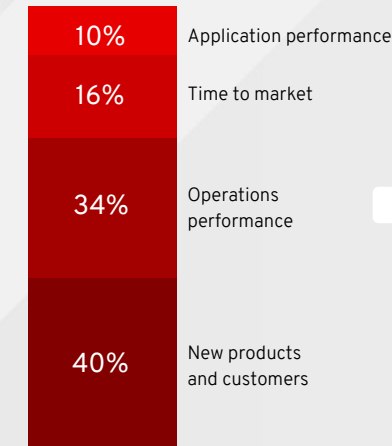
From cloud native application development

## BUSINESS OUTCOMES KPI GAINS



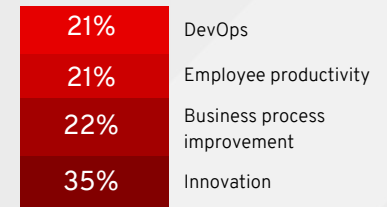
## ANNUAL BENEFITS PER CLOUD APPLICATION

US \$6.8 million



Additional revenue

US \$2.6 million



Reduced costs

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.

# EXAMPLES OF DIGITAL TRANSFORMATION

**KeyBank**



**Decreased**

cycle time and defect rate by embracing a container platform and automation

**amadeus**



**Unified**

process between development and operations and provide consistent platform from laptop to cloud

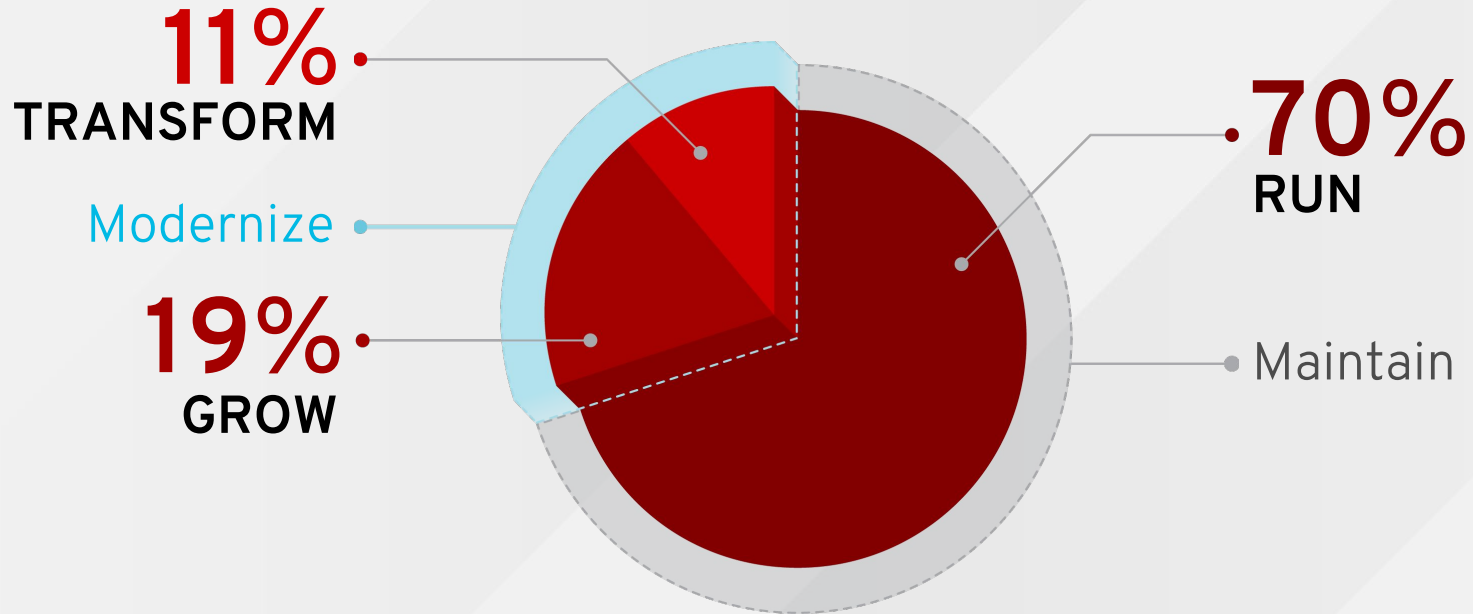
**BBVA**



**Improved**

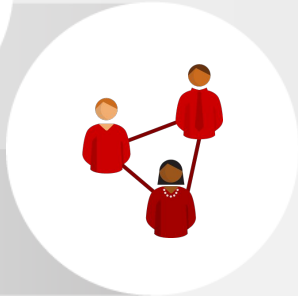
time to market and increased infrastructure utilization

# 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

Re-invest savings into multi-cloud management, automation, or containers.

## Cost savings

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

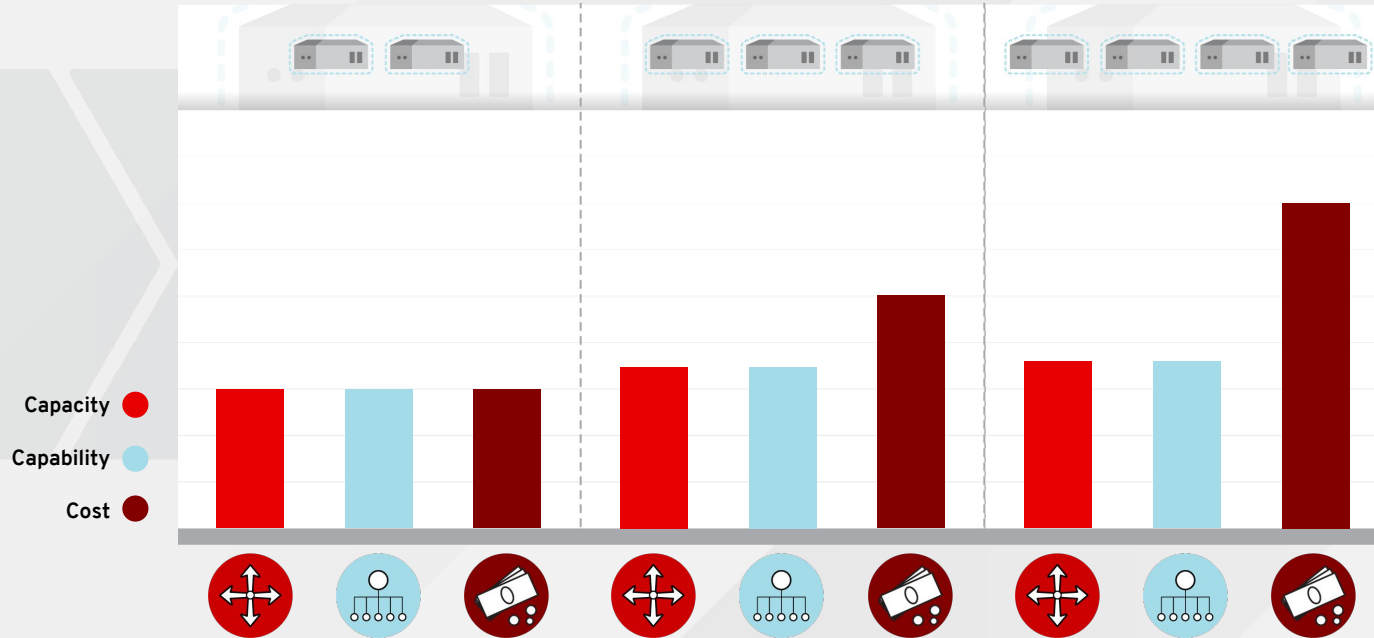
## Proven methodology

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

# STATUS QUO

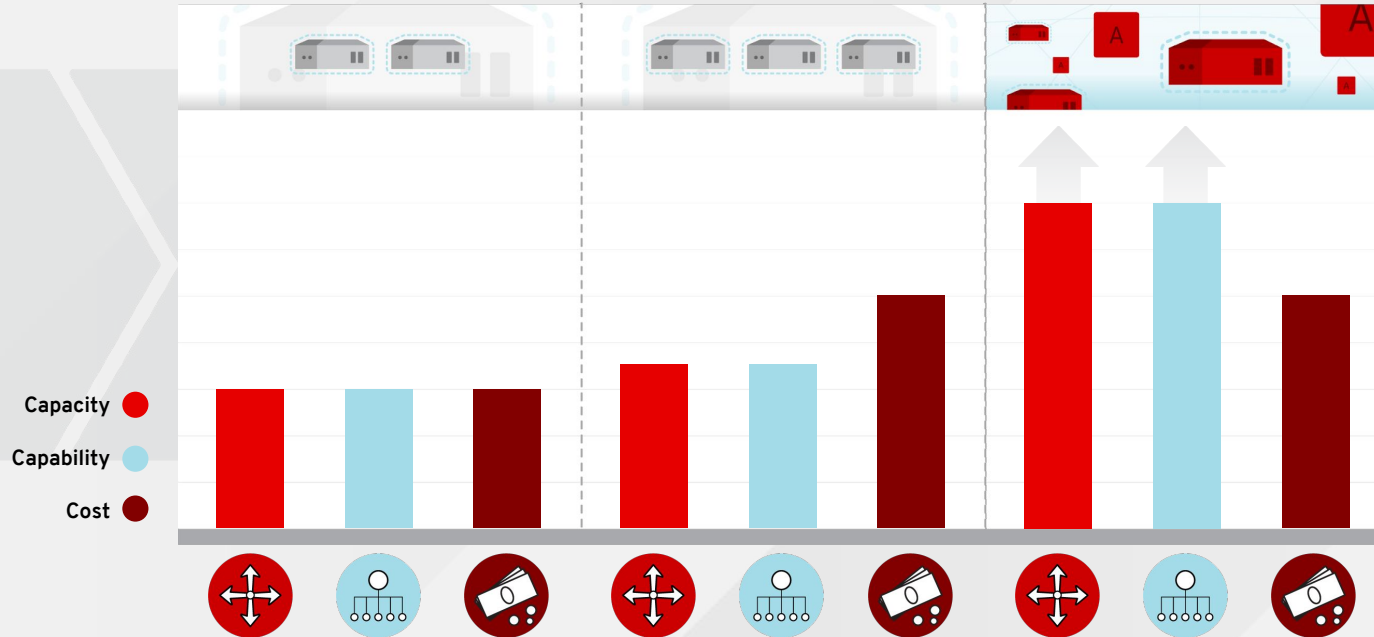
Continually increasing costs, limited capacity, virtual machine only





# MODERNIZE AND MIGRATE

Decrease cost, increase capacity, embrace containers





**REDUCED COST  
AND INVESTED IN  
DIGITAL TRANSFORMATION**

## 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.

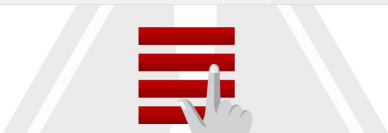
”

## BRET LAWSON

DIRECTOR  
INFRASTRUCTURE & OPERATIONS INTERMOUNTAIN HEALTHCARE

# 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

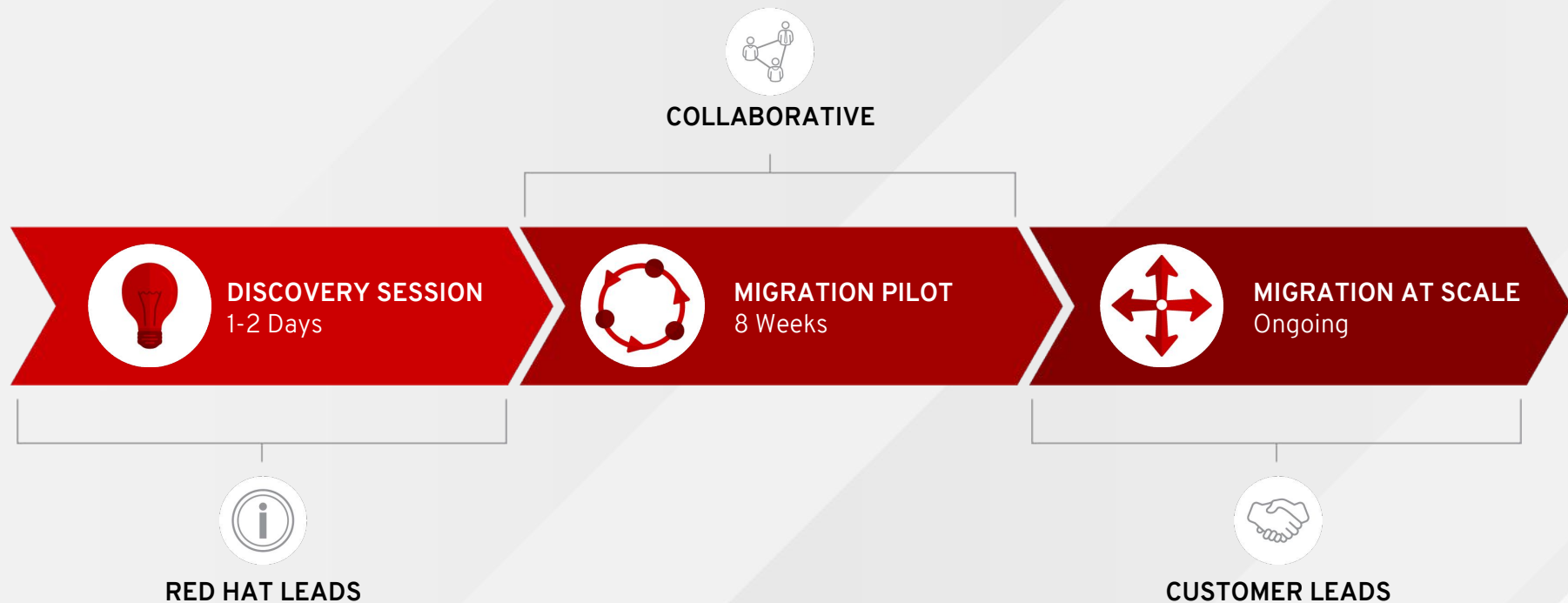
- Develop comprehensive tooling and approach for migrating workloads with key stakeholders to ensure success



### 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

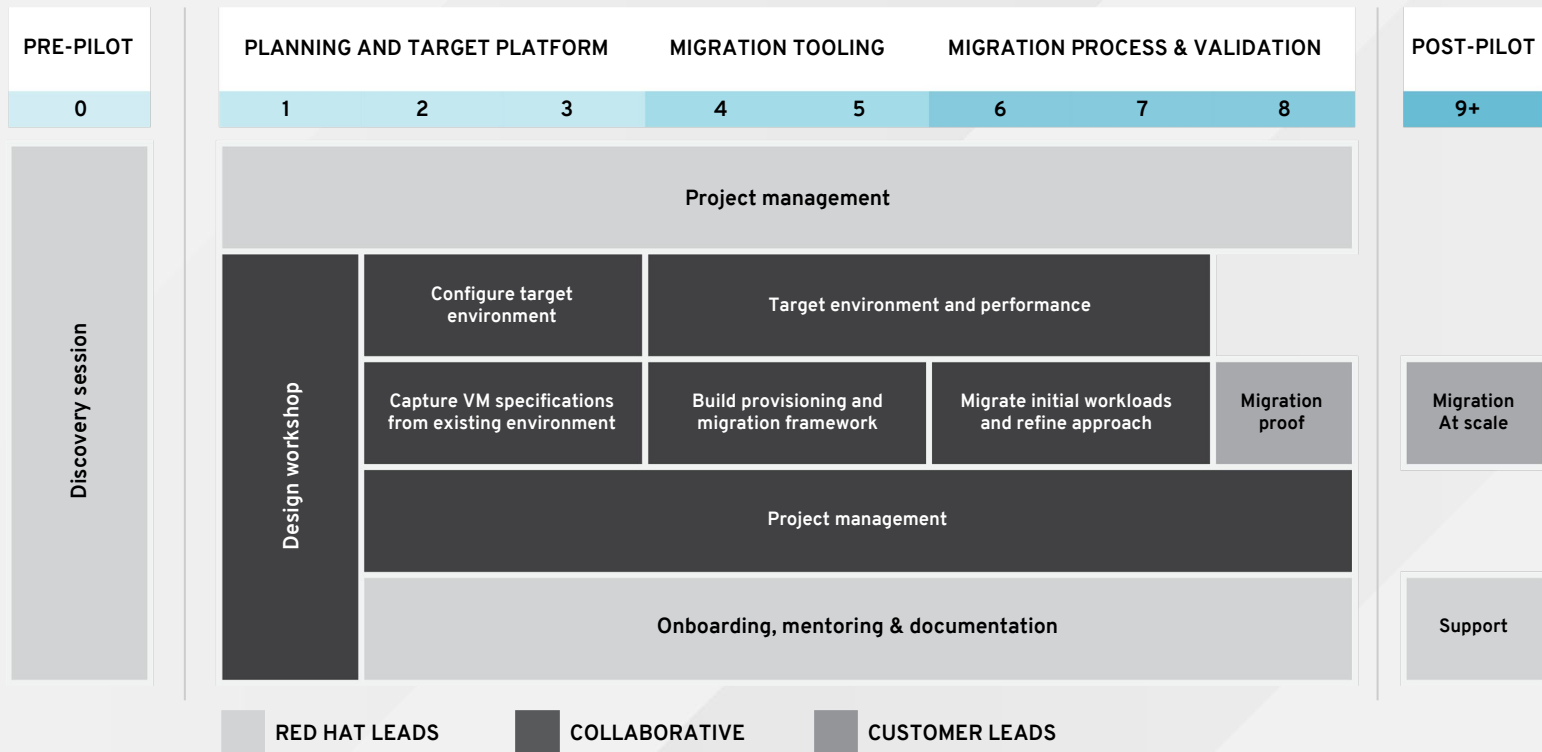
- Ongoing support and maintenance by customer's operations team



### RED HAT PARTICIPANTS

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

# TYPICAL MIGRATION PILOT





# DISCOVERY SESSION



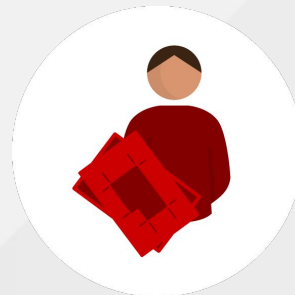
## REVIEW

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



## TRANSLATE

captured requirements to alternative infrastructure.



## GENERATE

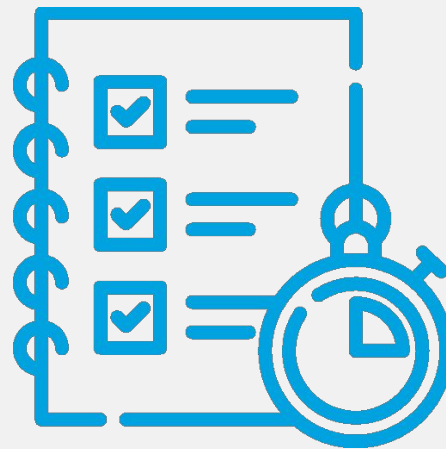
thorough plan for setup and ongoing operations of alternative infrastructure including required personnel training and investment.

# TECHNICAL OVERVIEW

# INFRASTRUCTURE MIGRATION SOLUTION

DISCOVERY AND ASSESSMENT OF YOUR MIGRATION

vSphere



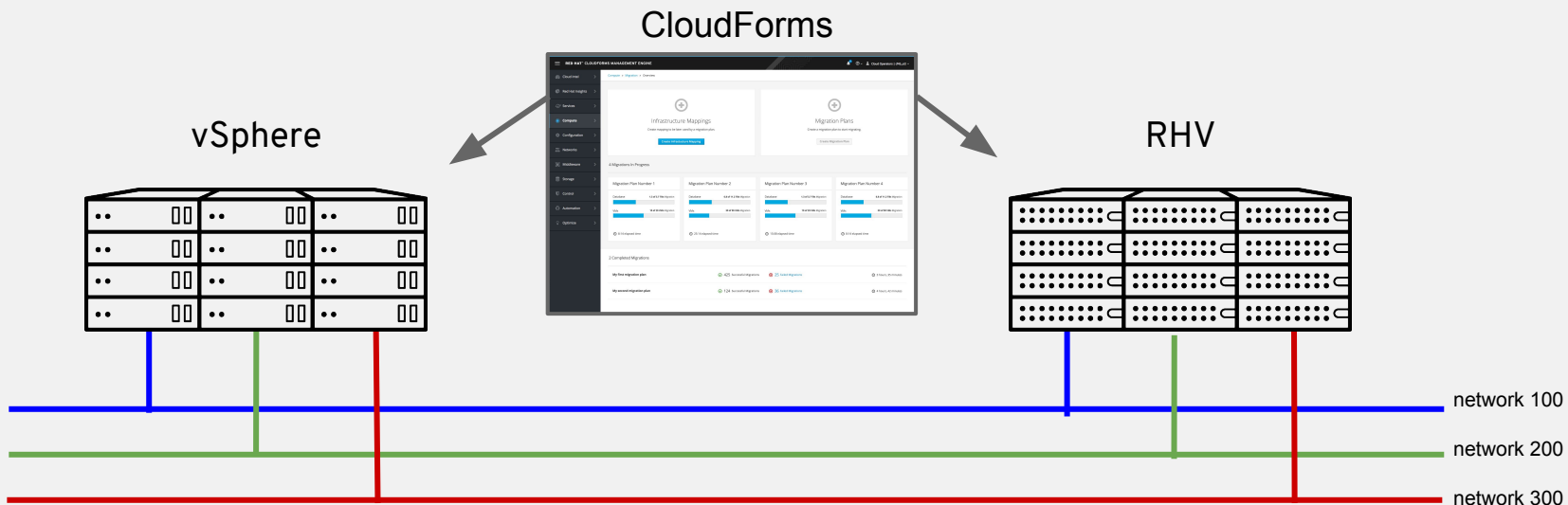
# INFRASTRUCTURE MIGRATION SOLUTION

SETTING UP A RHV ENVIRONMENT SIZED FOR YOUR MIGRATION



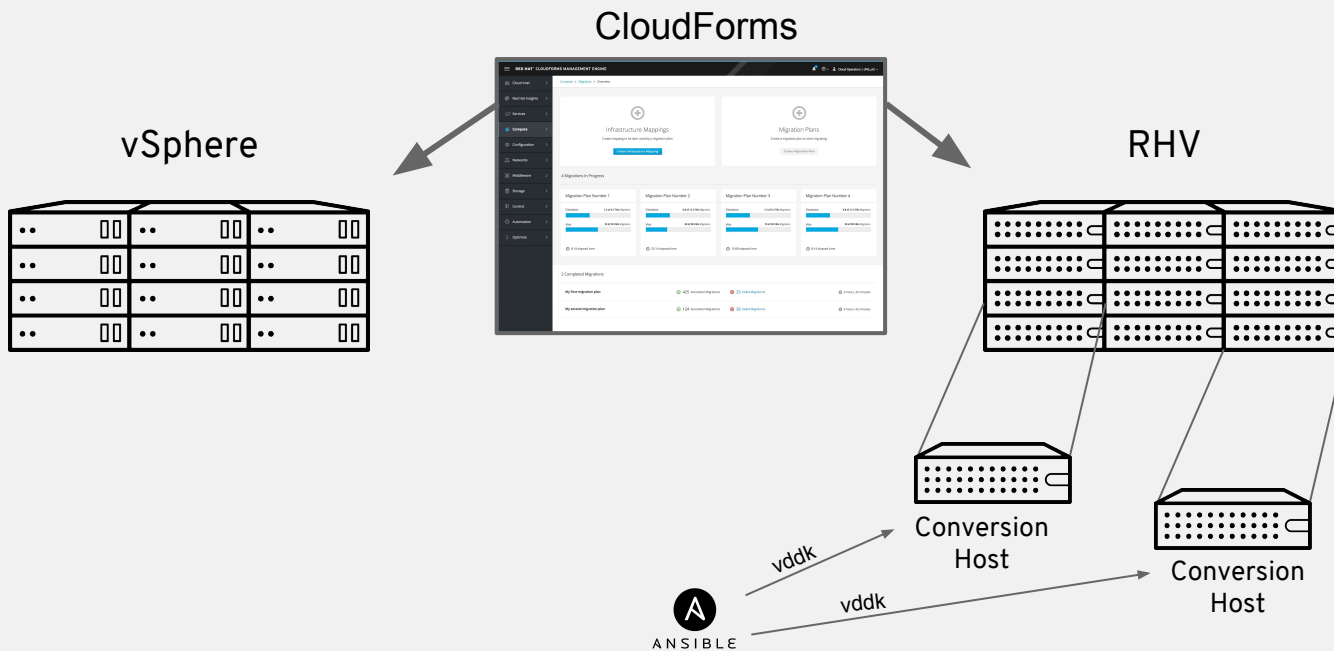
# INFRASTRUCTURE MIGRATION SOLUTION

INSTALL CLOUDFORMS AND CONFIGURE BOTH PROVIDERS



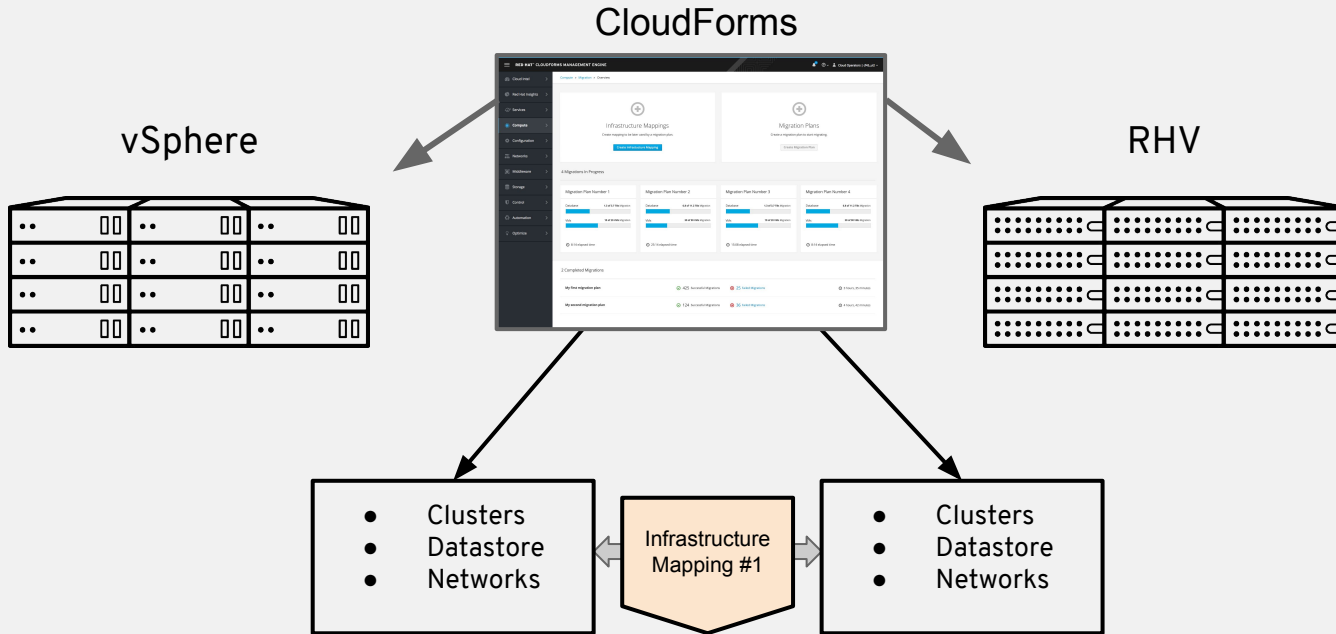
# INFRASTRUCTURE MIGRATION SOLUTION

## SETUP MULTIPLE CONVERSION HOSTS



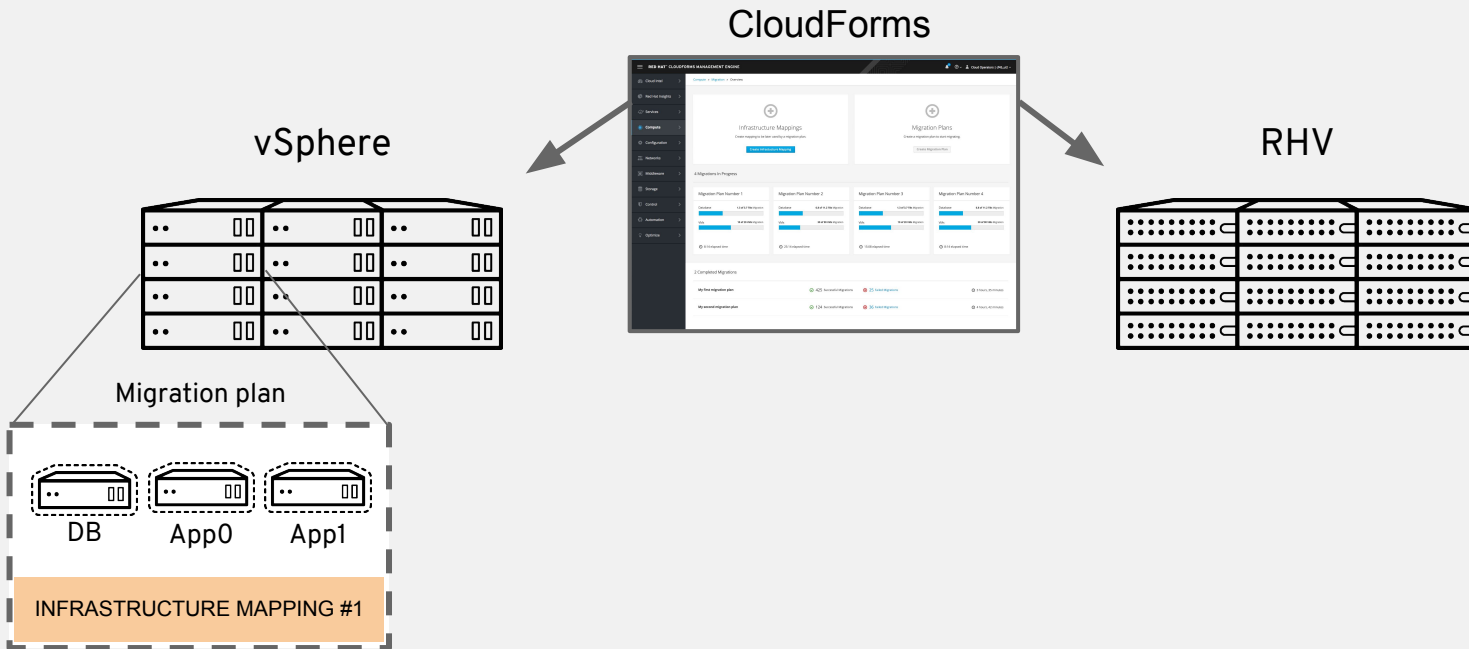
# INFRASTRUCTURE MIGRATION SOLUTION

USE THE INFRASTRUCTURE MAPPING WIZARD TO MAP BOTH SOLUTIONS



# INFRASTRUCTURE MIGRATION SOLUTION

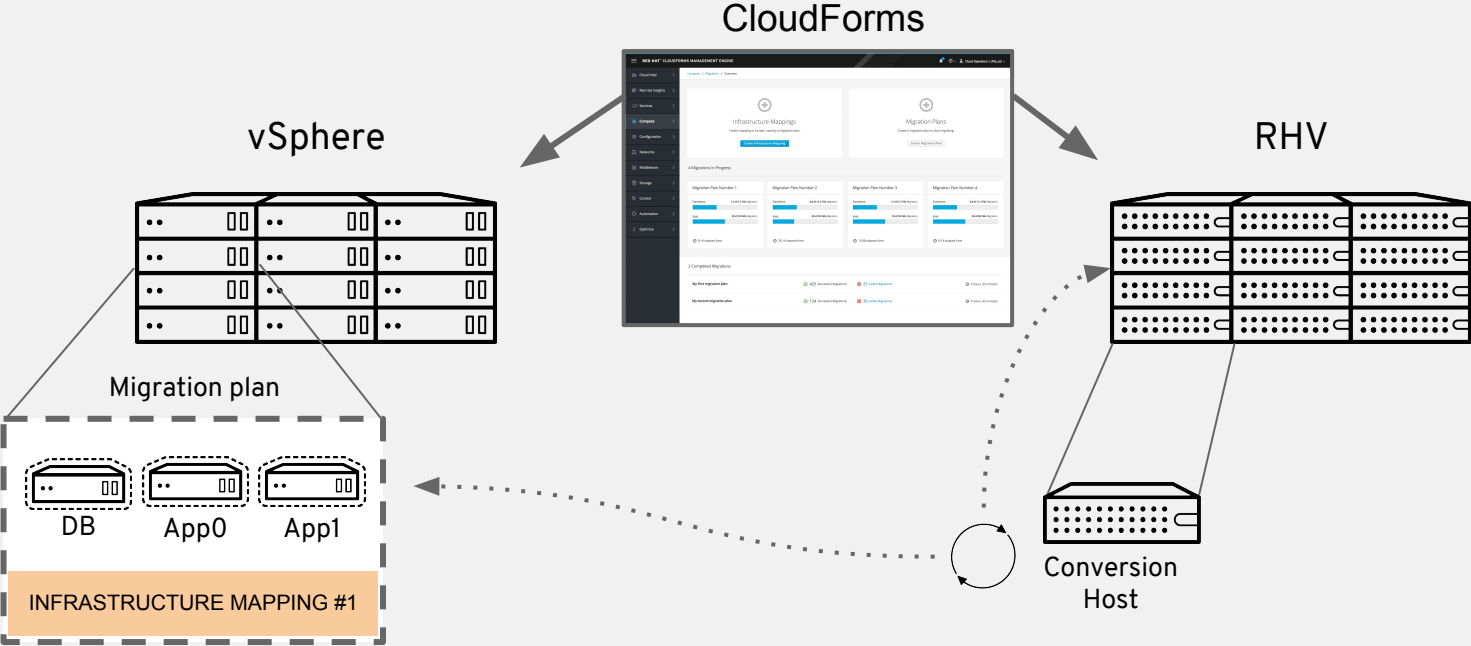
CREATE YOUR MIGRATION PLAN ATTACHED TO AN INFRASTRUCTURE MAPPING





# INFRASTRUCTURE MIGRATION SOLUTION

LAUNCH YOUR MIGRATION



# DEMONSTRATION

# MIGRATION DEMONSTRATION

The screenshot displays a cloud migration dashboard with a sidebar on the left and a main content area. The sidebar includes navigation options: Cloud Init, Red Hat Insights, Services, Compute (highlighted), Configuration, Network, Storage, Control, Administration, Options, and Monitor. The main content area is titled "Migrations" and shows a table of migration tasks. A green checkmark in the top right corner indicates "Migrations completed successfully".

Service	Status	Progress	Action
db	Migrating	4,200B of 4,200B Migrated	Download Log
dbtest	Migrating	16,000B of 17,100B Migrated	Download Log
dbtest	Migrating	8,000B of 11,100B Migrated	Download Log
it	Migrations completed	4,200B of 4,200B Migrated	Download Log

At the bottom of the migration list, there is a "1 of 4 steps" indicator and a "1 of 4" page navigation control.

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VIRTUALIZATION

## Why migrate your virtual infrastructure to Red Hat?



A decision like this isn't just about infrastructure. It's about what your infrastructure can (or can't) do to support the technologies you want to deploy. It's the difference between choosing the right software for the situation or weighing the tradeoffs of complying with an increasingly expensive enterprise license agreement (ELA).

*Think about it like this:*

Imagine you're an IT architect building your infrastructure on proprietary virtualization technology. When your company is ready to adopt new technologies like hybrid cloud and containers, you're limited to either what's compatible with the vendor's virtual infrastructure or time-intensive workarounds.

With a vision of the future, your developers cobble together a system—but each iteration is more complicated than the last. To keep everything working, your system administrators are often in the office on weekends troubleshooting system failures or rewriting patches and updates. And you start to realize that the next licensing agreement you sign will take away even more money you could have invested in modern products and solutions.

*On the other hand:*

### Featured resources:

[Calculator: Find out your migration savings](#)[Webinar: The great escape: Migrating to a modern virtualized environment](#)

### Read more about virtualization:

[Virtualization](#)[Virtualization management](#)[Cloud computing vs. virtualization](#)[KVM](#)

### Get trained:

[Virtualization and infrastructure migration technical overview \(RH018\)](#)

Learn the basics of open source virtualization and migration planning

<https://red.ht/possibilities>



# THANK YOU



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