THE INTEGRATED CLOUDS

Linking a Complex Infrastructure & Making it Work

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Introduction

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About BJ’s Wholesale

BJ’s Wholesale Club first introduced the warehouse club concept to the northeastern U.S. in 1984. Since then we’ve expanded, moving north to Maine, south to Florida and as far west as Ohio. Today, we operate over 213 Clubs, 131 Gas Stations, and our locations are across 15 States.

In-Club and online, BJ’s offers Members a huge selection of the very best products for home and business — from groceries, cleaning supplies and health & beauty to home goods, computers, electronics and more — at incredibly low prices every day.

BJ’s is ranked first for retail customer experience according to the 2017 Temkin Experience Ratings.

The Integrated Clouds

Linking a Complex Infrastructure & Making it Work

How BJ's Wholesale found success in automation and integration

- Challenges
- The Solution
- Demo / Walkthru
- Q&A

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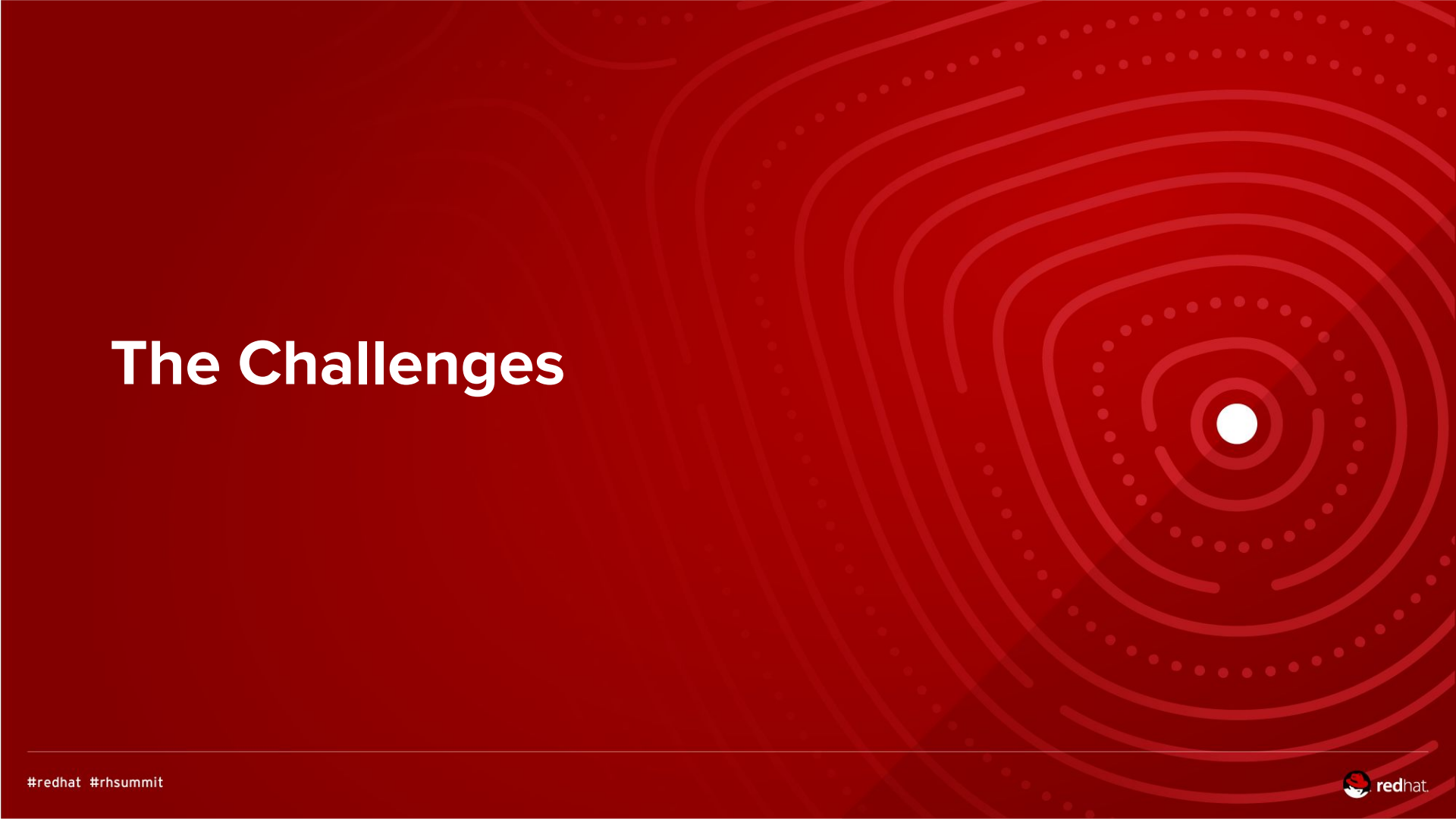
The Challenges



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Centralized Control and Governance

Centralized Control and Governance

Networking Management

Centralized Control and Governance

Drift Control &
Config Management

Networking Management

Centralized Control and Governance

Patching / Errata

Drift Control &
Config Management

Networking Management

Centralized Control and Governance

Patching / Errata

Rapid Scale-out of New Services

Drift Control &
Config Management

Networking Management

Centralized Control and Governance

Patching / Errata

Rapid Scale-out of New Services

Drift Control &
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Networking Management

Access Controls

Centralized Control and Governance

Patching / Errata

Rapid Scale-out of New Services

Auditing / Compliance

Drift Control &
Config Management

Networking Management

Access Controls

Centralized Control and Governance

Retirement & Cleanup of Decommissioned Systems

Patching / Errata

Rapid Scale-out of New Services

Auditing / Compliance

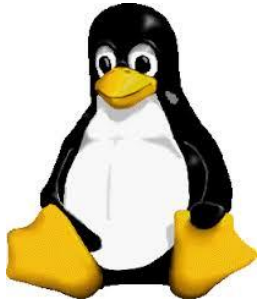
Drift Control & Config Management

Networking Management

Access Controls

We Need Some Better Tools...

{php}
IPAM



Nessus®
vulnerability scanner

puppet

Centrify®

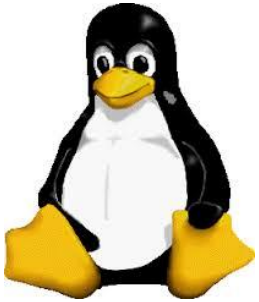
vmware®

RED HAT
ENTERPRISE
VIRTUALIZATION

amazon
web services

RED HAT®
SATELLITE

All we've done is create NEW SILOS!



Nessus® vulnerability scanner

Centrify®

vmware®

RED HAT ENTERPRISE VIRTUALIZATION

amazon web services

RED HAT® SATELLITE

The Solution

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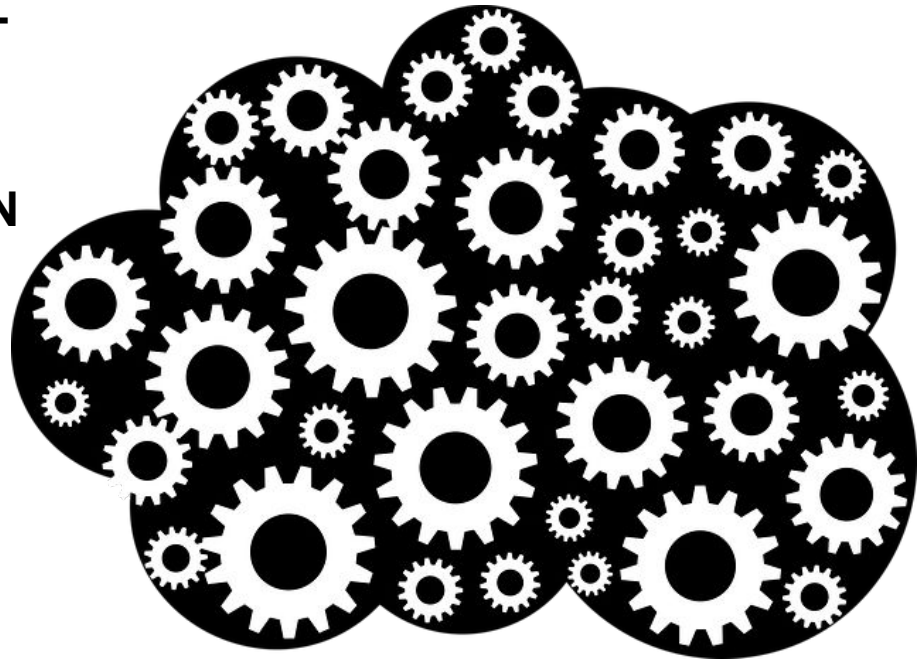
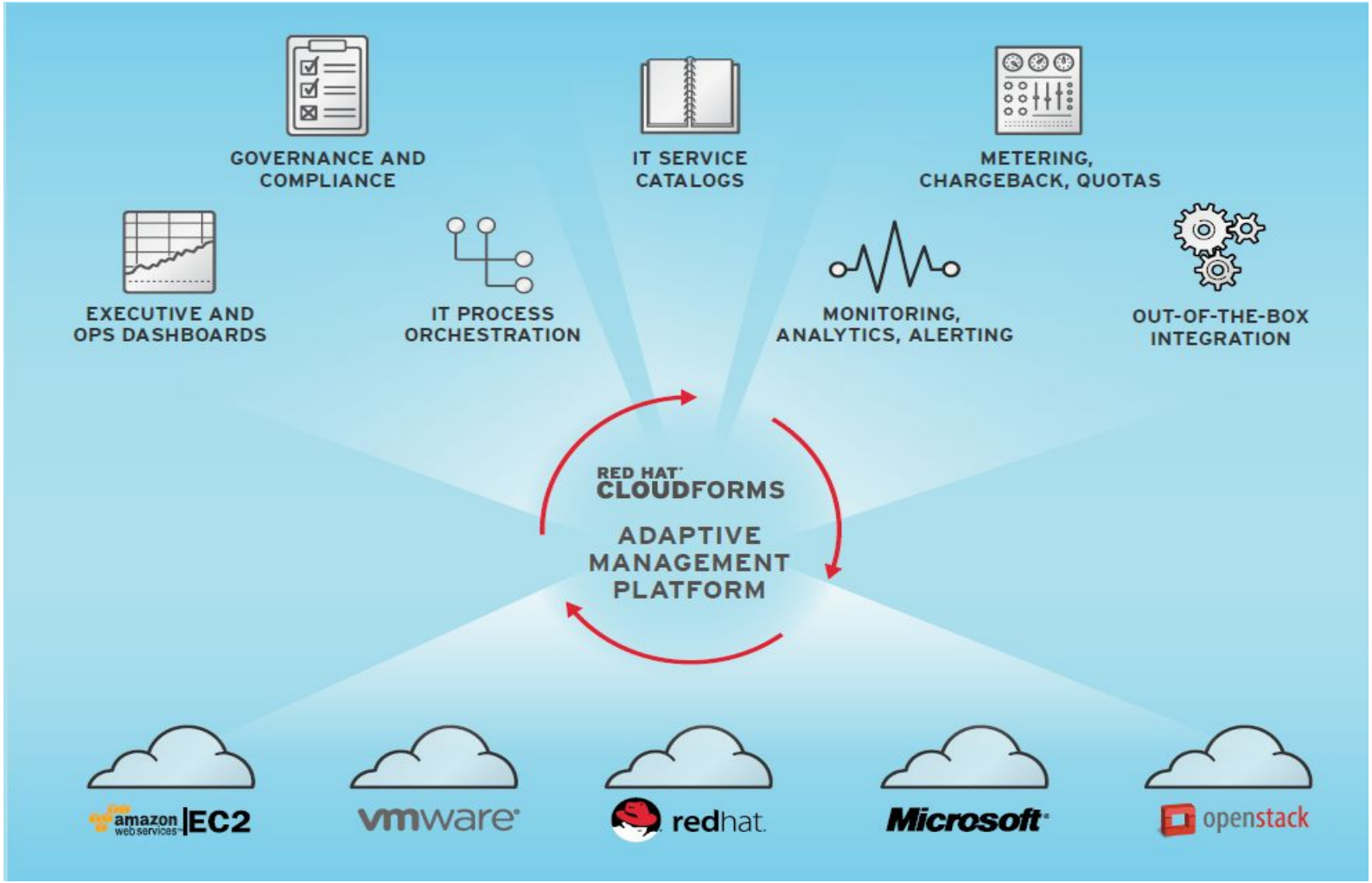
The Solution: Centralize The Automation Tools

- CONFIGURATION MANAGEMENT
- PATCH MANAGEMENT
- IPAM
- CENTRALIZED AUTHENTICATION
- SECURITY COMPLIANCE
- MONITORING
- TEMPLATES
- CLOUD-INIT
- CLOUDFORMATIONS
- SHOWBACK




GOVERNANCE AND COMPLIANCE
IT SERVICE CATALOGS
METERING, CHARGEBACK, QUOTAS
EXECUTIVE AND OPS DASHBOARDS
IT PROCESS ORCHESTRATION
MONITORING, ANALYTICS, ALERTING
OUT-OF-THE-BOX INTEGRATION
RED HAT CLOUDFORMS
ADAPTIVE MANAGEMENT PLATFORM
amazon web services EC2
vmware
redhat
Microsoft
openstack

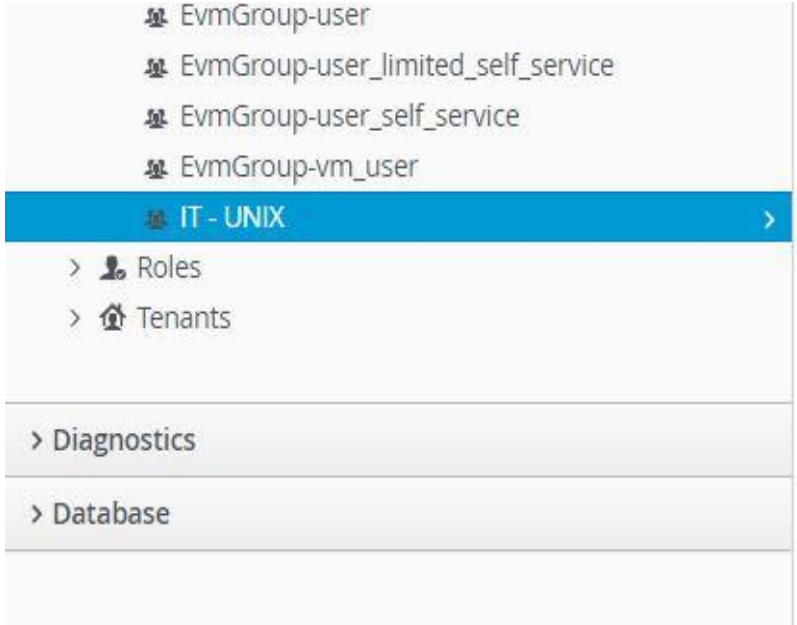
CloudForms Delivers IT Management Across Platforms

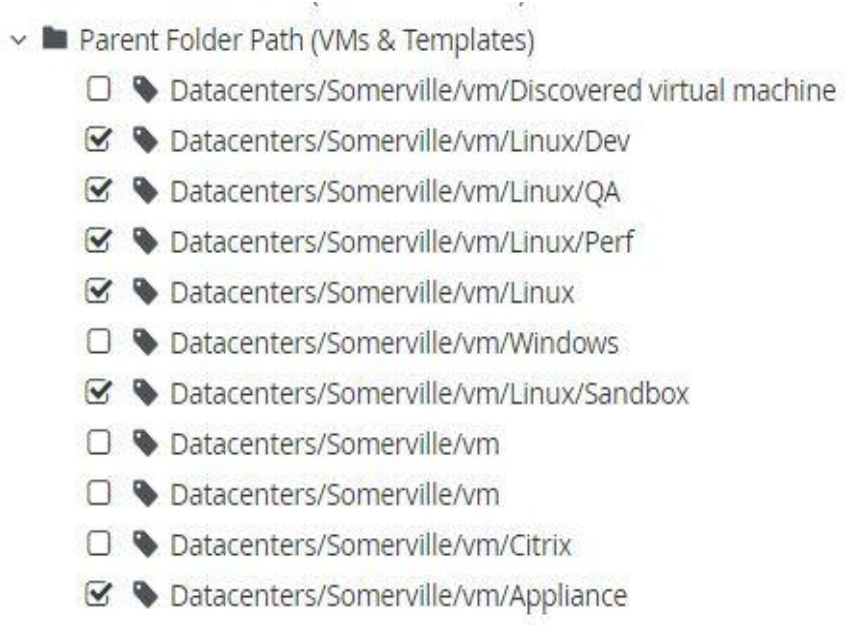
- RBAC Enforced - Multi-group - Multi-cloud Management
- Provisioning with Quota Controls
- Automatic Retirement (Ability to over rule)
- Modification of Deployed Systems
- Capacity Planning
- Security / Compliance
- Approval Workflows
- Drift Management
- User/Self-service Portal with Extensive Service Catalog
- Centralized Cross-system Tagging
- Reporting
- Event-based Triggers (Especially when changes happen outside CF)

Our Third Party Integrations

- PHP IPAM
- Puppet Enterprise
- Red Hat Satellite 6
- Centrify
- Microsoft Azure
- AWS
- VMware
- RHEV
- Tenable/Nessus
- Ansible Core (On the CloudForms Appliance Itself)

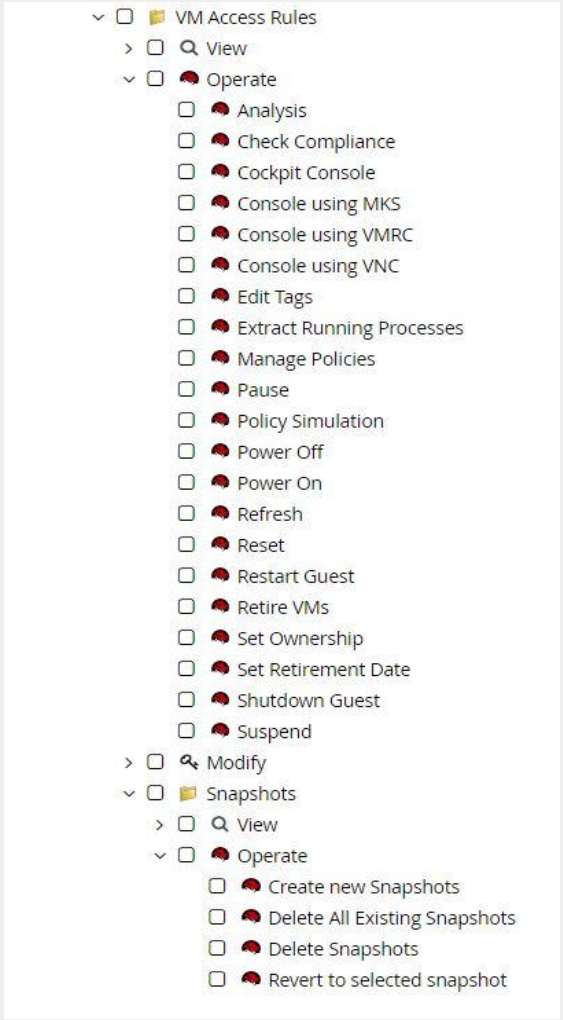
RBAC Restrict Views



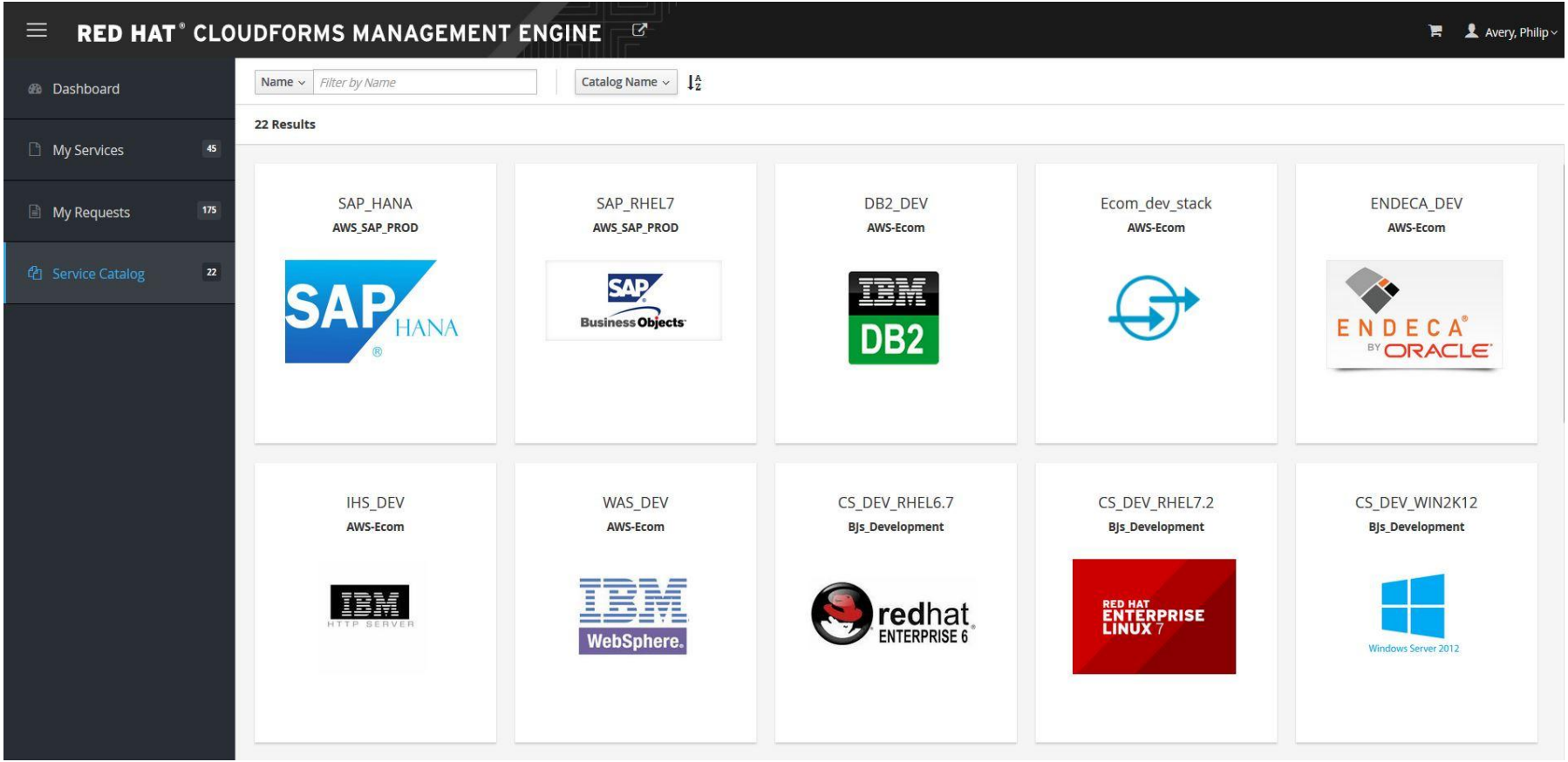


RBAC ROLES

Granular control over what groups or users can or cannot do



Service Catalog

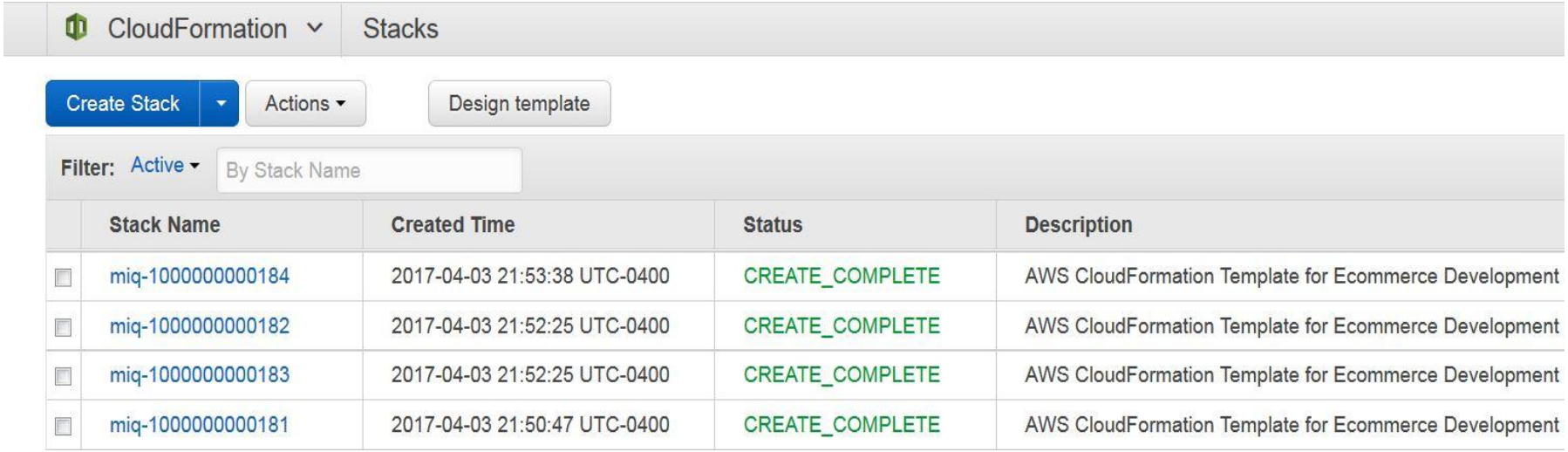


Default AWS Stack Provisioning Code

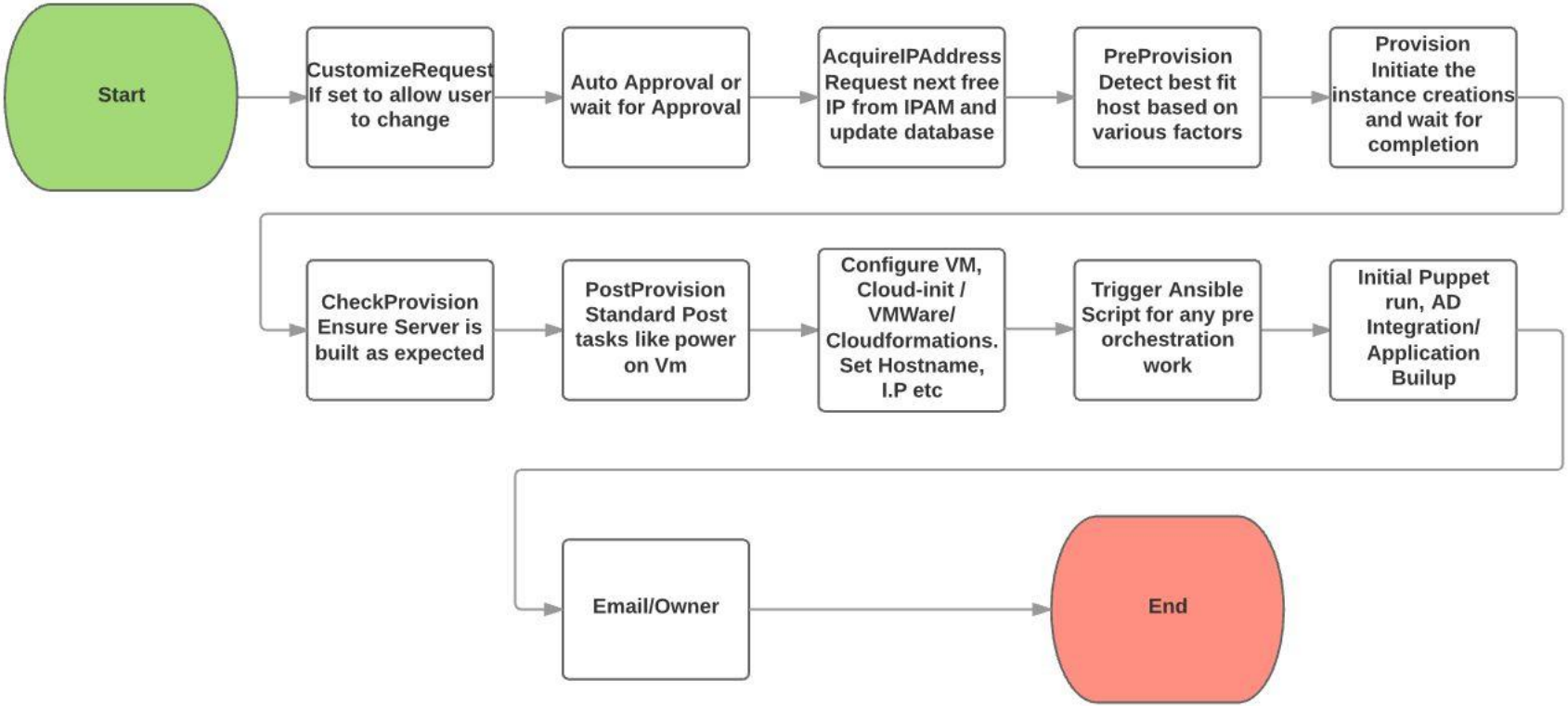
Data

```
#
# Description: This method prepares arguments and parameters for orchestration provisioning
#

$evm.log("info", "Starting Orchestration Pre-Provisioning")

service = $evm.root["service_template_provision_task"].destination

# Through service you can examine the orchestration template, manager (i.e., provider)
# stack_name, and options to create the stack
# You can also override these selections through service

$evm.log("info", "manager = #{service.orchestration_manager.name}(#{service.orchestration_manager.id})")
$evm.log("info", "template = #{service.orchestration_template.name}(#{service.orchestration_template.id}))")
$evm.log("info", "stack name = #{service.stack_name}")
# Caution: stack_options may contain passwords.
# $evm.log("info", "stack options = #{service.stack_options.inspect}")

# Example how to programmatically modify stack options:
#service.stack_name = 'new_name'
#stack_options = service.stack_options
#stack_options[:disable_rollback] = false
#stack_options[:timeout_mins] = 2 # this option is provider dependent
# stack_options[:parameters]['flavor'] = 'm1.small'
# # Important: set stack_options
# service.stack_options = stack_options

# BJs custom code
service.stack_name = "miq-#{service.id}"

```

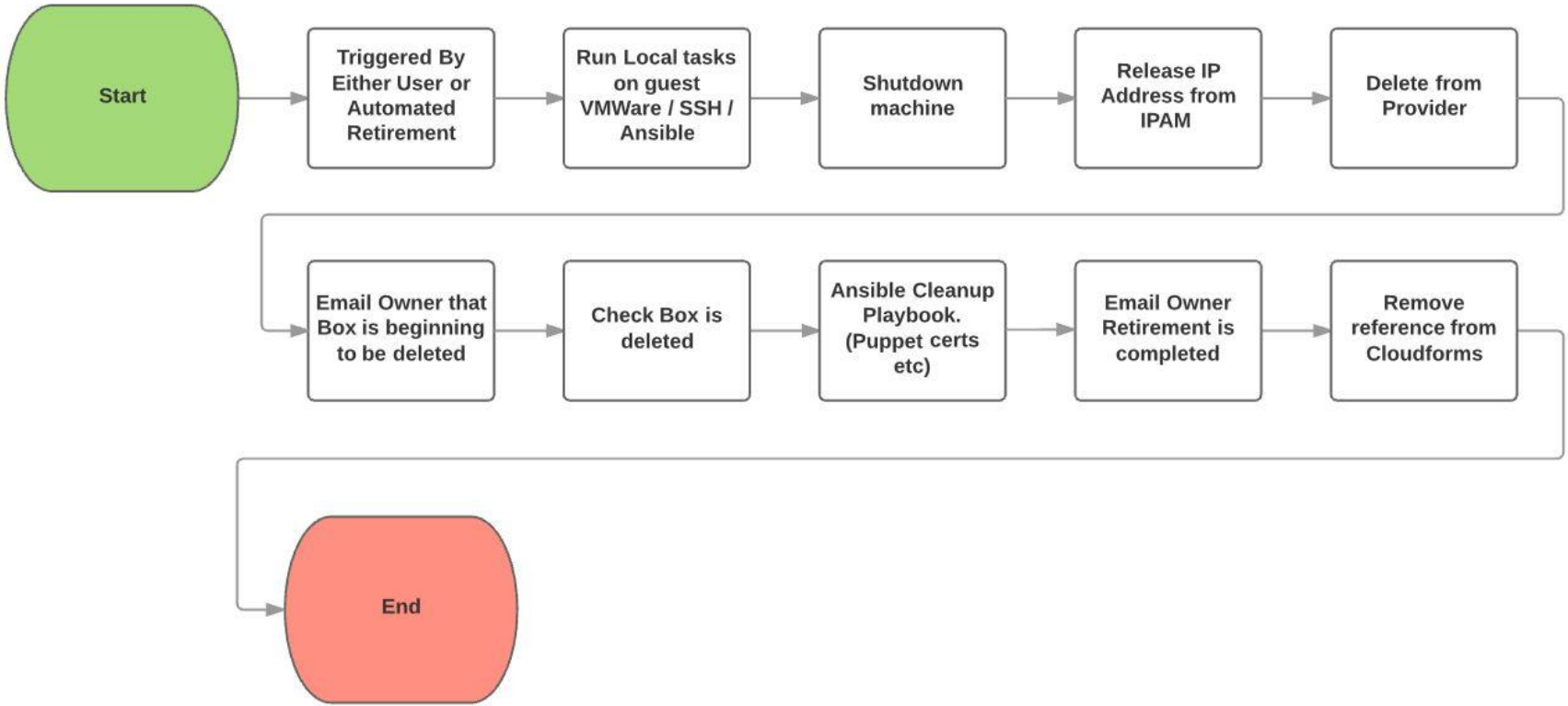
Results in AWS



CLOUDFORMS PROVISION FLOW



CLOUDFORMS RETIREMENT FLOW



Demo / Walkthru

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Q & A

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Additional Resources

Phil Avery's Blog
http://averytechguy.com

Peter McGowan's Book (Mastering CloudForms Automation)
https://www.gitbook.com/@pemcg

Christian Jung's Blog
http://www.jung-christian.de

The Official Red Hat CloudForms Blog
http://CloudFormsBlog.com

Matt St. Onge's Blog
http://MattTheITGuru.com

Kevin Morey's GitHub Page
https://github.com/ramrexx

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