

Demystifying Infrastructure Automation with Ansible

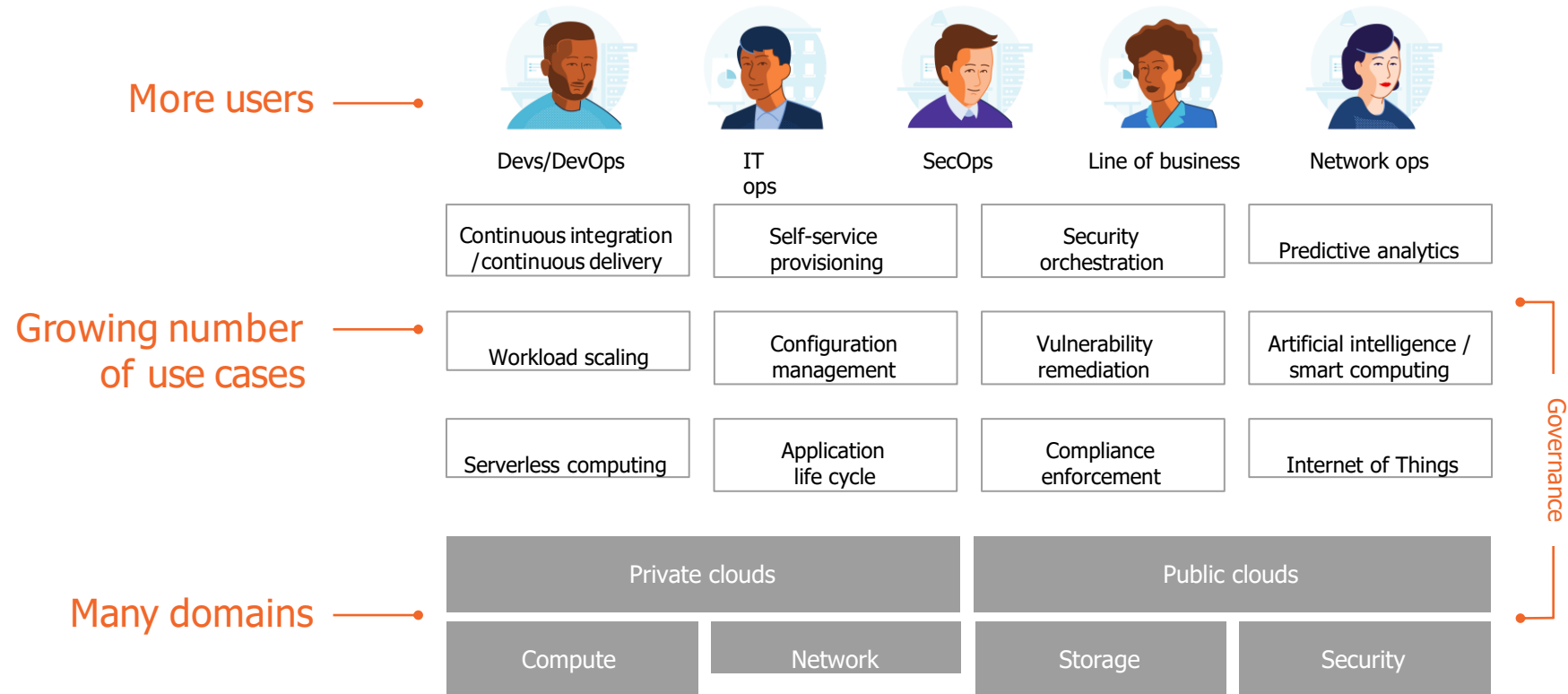
October 7, 2021
2PM – 3PM

About Emergent

Emergent is an award-winning solutions provider, value-added reseller, application partner, and trusted Red Hat specialist partner. Based in Virginia Beach, Virginia in 2006, Emergent values the principles of open design, delivering solutions built on a foundation of transparency, collaboration, and continuous testing and improvement — enabling operations in all levels of government, commercial business and higher education.

Many organizations have a problem

Too many unintegrated, domain-specific tools



Where do you want to go?



Connected teams accelerate digital transformation

- Drastically accelerate speed to market
- Foster a DevOps culture
- Scale hybrid cloud environments
- Increase infrastructure stability
- Maintain continuous compliance



Coordinated automation reduces inefficiencies

- Lower end-to-end production
- Minimize human errors and downtime
- Reduce complexity in IT environment
- Work to eliminate security vulnerabilities
- Decrease mean time to repair (MTTR)



Unite teams and eliminate isolated groups



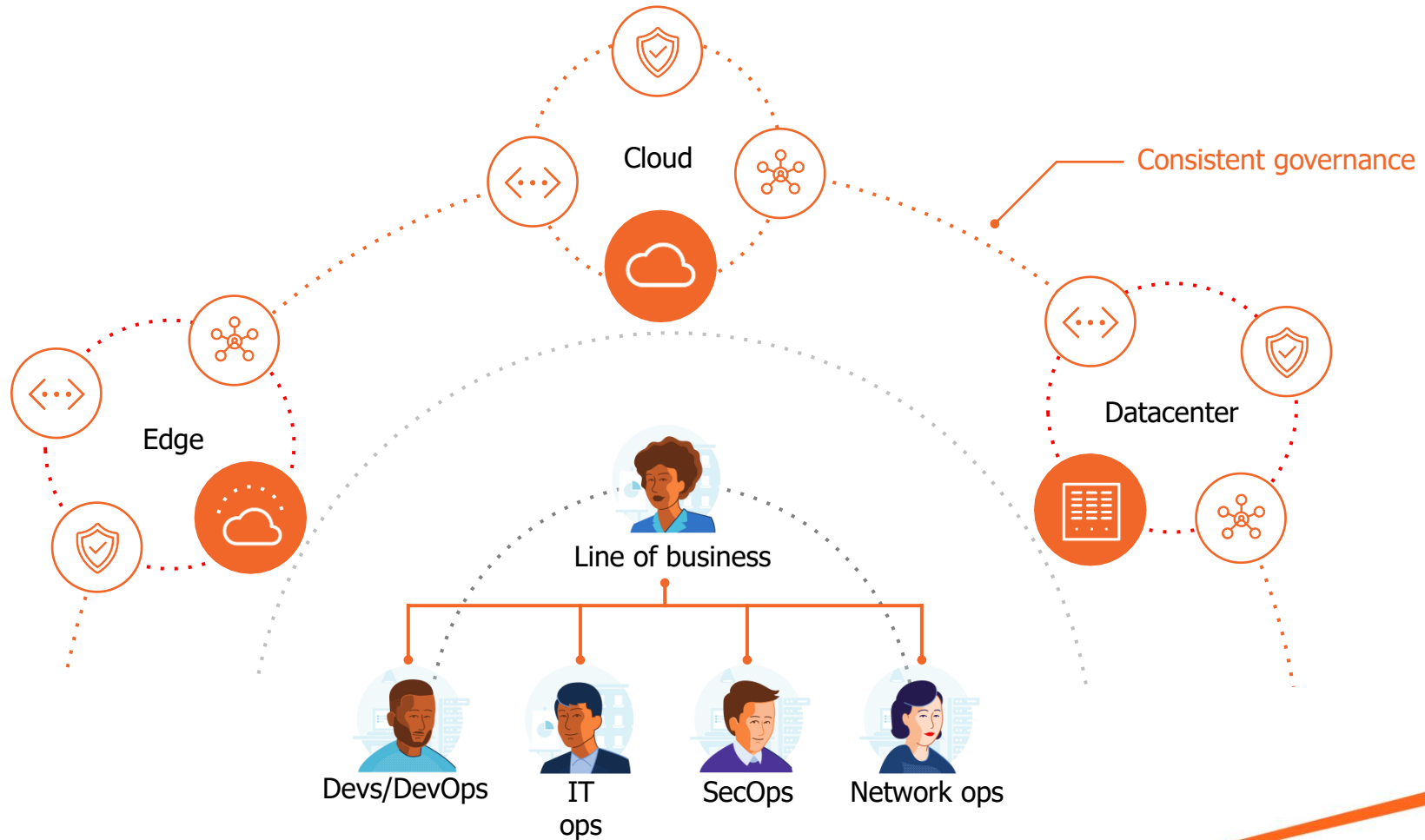
Automate tasks easier



Create a collaborative DevOps environment

Break down silos

Different teams a single platform



Automate the deployment and management of automation for your entire IT footprint

Do this...

Orchestrate

Manage Configurations

Deploy Applications

Provision

Deliver Continuously

Secure and Comply

On these...



Firewalls



Load balancers



Applications



Containers



Clouds



Servers



Infrastructure



Storage



Network devices



And more

What Makes a Platform?



Red Hat Ansible Automation Platform

One subscription. One platform.



Ansible Content Collections A new method of building and consuming Ansible content



Automation services catalog
A venue for developers and business users to manage, provision, and retire automation resources



Automation Hub
Private content repository for sharing automation



Content packages
Opinionated, focused content, targeting key automation use cases, from Red Hat and certified partners

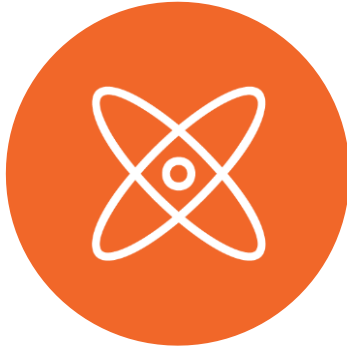


Scalable execution
Extending Red Hat Ansible Tower to support automation whenever and wherever you need it



Automation Analytics
Analytical insights into the automation runtime

Why the Ansible Automation Platform?



Powerful

Orchestrate complex processes at enterprise scale.



Simple

Simplify automation creation and management across multiple domains.



Agentless

Easily integrate with hybrid environments.



Ansible playbooks

```
---  
- name: install and start apache  
  hosts: web  
  become: yes  
  
  tasks:  
    - name: httpd package is present  
      yum:  
        name: httpd  
        state: latest  
  
    - name: latest index.html file is present  
      template:  
        src: files/index.html  
        dest: /var/www/html/  
  
    - name: httpd is started  
      service:  
        name: httpd  
        state: started
```



Red Hat Ansible Automation Platform



Improve efficiency

Maximize current resources while investing and involving your entire IT organization.



Increase productivity

Accelerate business outcomes and consolidate tools across the entire hybrid cloud infrastructure.



Control risk and expenses

Increase compliance while minimizing errors and reducing the cost of production.

Emory University Case Study



Emory University conquers sudo threat with Red Hat



Emory University's security team alerted the IT team of a security vulnerability that needed to be remediated quickly. An event such as this would have been very disruptive to the team's regular operational and project work, not to mention the hours required to manually remediate the patch across more than 500 Red Hat Enterprise Linux servers as well as the potential data breach. Emory used Red Hat Ansible Automation Platform to write a playbook and automate remediating all hosts. What would have taken up to two weeks to remediate across all servers took collectively four hours.

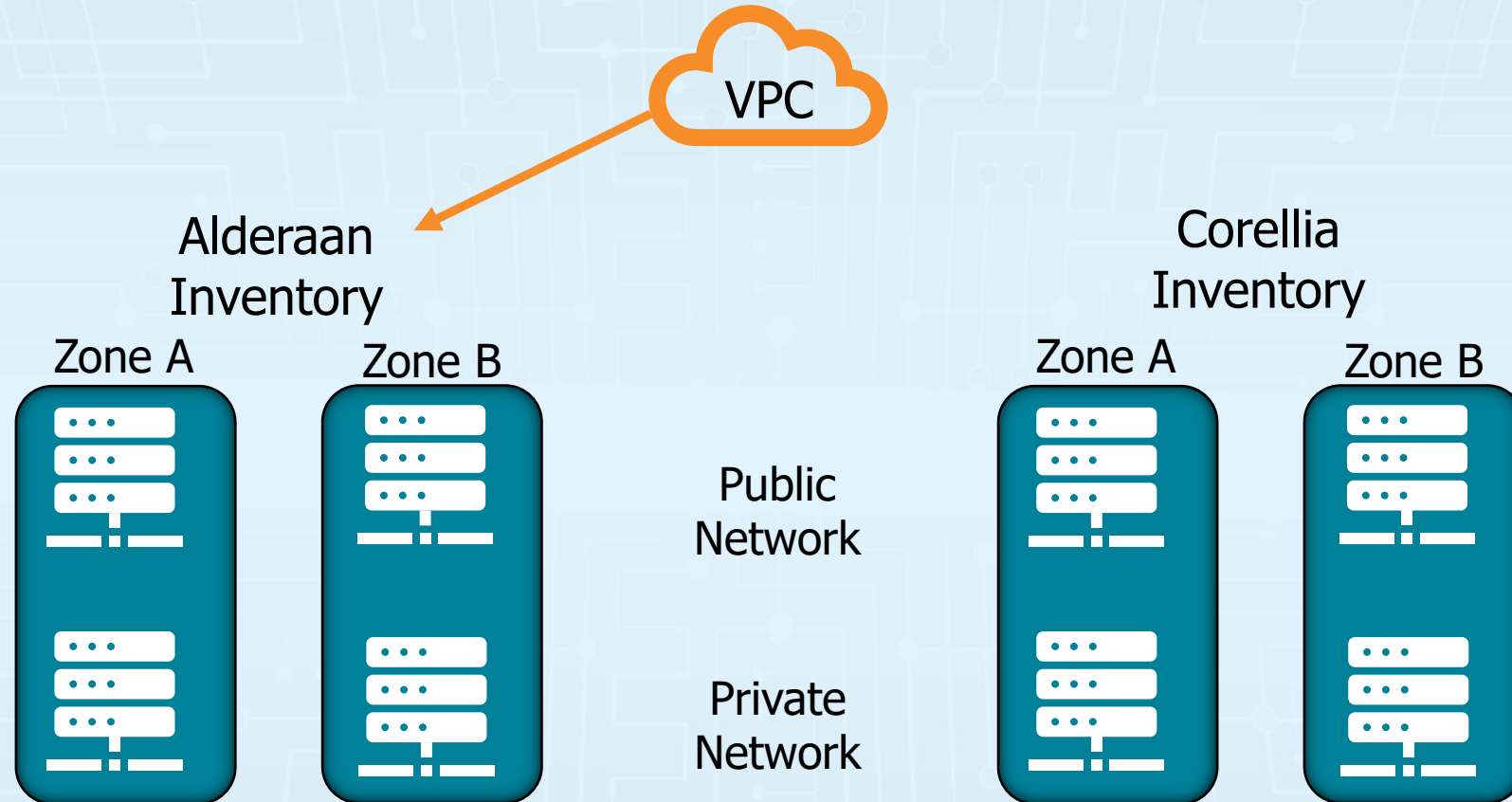
Software Red Hat® Ansible® Automation Platform Red Hat Enterprise Linux®	 <p>Headquarters</p>	Education 15,400 university faculty and staff
Services Red Hat Training Red Hat Professional Services		Benefits <ul style="list-style-type: none"> Completed patch updates in hours, not weeks Freed valuable resources to focus on higher-value projects Improved agility in face of unique COVID-19 challenges
Partner Amazon Web Services	<p>"People didn't think we could patch Linux servers every 30 days, but with Red Hat Ansible Automation Platform it's possible and it's necessary."</p> <p>Steve Ellegren Manager of Systems Engineering Office of Information Technology Emory University</p>	

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1. Identified security vulnerability
2. Ansible allowed them to automate tedious tasks
3. Patched over 500 machines in 4 hours
4. Ansible protected EU from a security threat
5. Ansible freed EU IT staff to continue working on projects

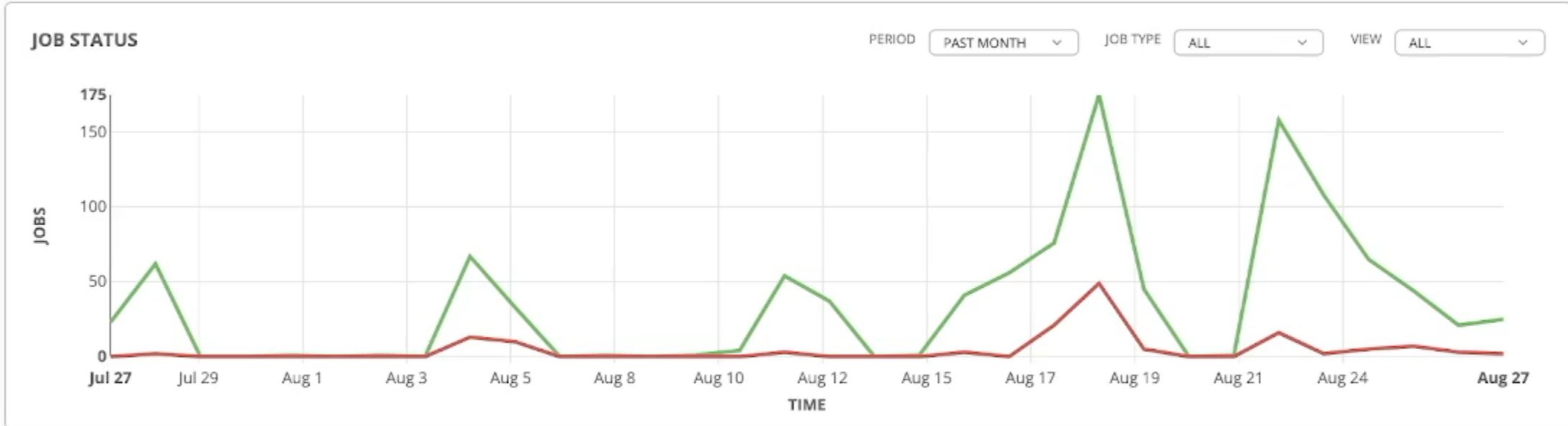
Today's Demo Environment



DASHBOARD

- ☰
- VIEWS
 - Dashboard
 - Jobs
 - Schedules
 - My View
- RESOURCES
 - Templates
 - Credentials
 - Projects
 - Inventories
 - Inventory Scripts
- ACCESS
 - Organizations
 - Users
 - Teams
- ADMINISTRATION
 - Credential Types
 - Notifications
 - Management Jobs

29 HOSTS	0 FAILED HOSTS	21 INVENTORIES	0 INVENTORY SYNC FAILURES	18 PROJECTS	0 PROJECT SYNC FAILURES
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RECENTLY USED TEMPLATES [VIEW ALL](#)

NAME	ACTIVITY	ACTIONS
teardown vpc stack (cf)	🟢🟢🟢🟢🟢🟢🟢🟢🟢🟢🔴🔴🟢	🚀
launch rhel cluster tier	🔴🔴🟢🟢🟢🟢🟢🟢🟢🟢🟢🔴	🚀
teardown rhel cluster	🟢🟢🟢🟢🟢🟢🟢🟢🟢🟢	🚀

RECENT JOB RUNS [VIEW ALL](#)

NAME	TIME
● teardown vpc stack (cf)	8/28/2021 12:03:59 PM
❗ launch rhel cluster tier	8/28/2021 12:02:44 PM
❗ launch rhel cluster tier	8/28/2021 12:00:50 PM



VIEWS

Dashboard

Jobs

Schedules

My View

RESOURCES

Templates

Credentials

Projects

Inventories

Inventory Scripts

ACCESS

Organizations

Users

Teams

ADMINISTRATION

Network Demo



- DETAILS
- PERMISSIONS
- NOTIFICATIONS
- JOB TEMPLATES**
- SCHEDULES

SEARCH



KEY



Compact Expanded Name (Ascending)

add ios user Job Template			
check banner Job Template			
check banner compliance Job Template			
correct banner compliance Job Template			
firewall config Job Template ███████████			
init acl config Job Template ███████████			
Inventory script for netconf Job Template			

We'll help you along this automation journey

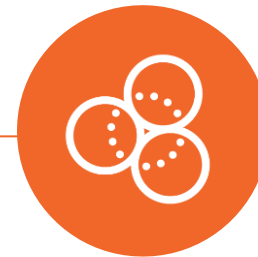
Consulting, training, and support for digital transformation



**Increment
0**
Discover



**Increment
1**
Pilot



**Increment
2**
Integrate



**Increment
3**
Accelerate



**Increment
4**
Optimize



Infrastructure



Cloud



Network



Security

90+
certified platforms



Three Pillars of our Business

Open hybrid cloud

Red Hat's strategy and vision for its portfolio of software, tools, and services built in the open source development model and designed for future architectures that are open, secure, and agile across hybrid, multicloud



Thank You!

Your Presentors Today



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