How to use this deck

Name:

Ansible Cloud Automation – 301 – Technical Deck
i.e. "meeting 3 deck"

Purpose:

This deck is for crafting "technical level" conversations around Ansible Cloud Automation with a customer after an account executive has established a sales pitch.

These can be focused on individual platform components
or used for deep dives.

Last updated:

June 7, 2022

What this deck is for?

Third conversation with customers covering a 60 minute session. This deck covers AAP version 2.x for Cloud Automation

What is this deck is NOT for?

Business level discussions, or to be sent to customers without a discussion.

Google Slides source link (Red Hat internal):

https://docs.google.com/presentation/d/1voEJruI-tvJDzqNhdzgiMxv2-gr3EKWsh7lpzhGkcf0/edit?usp=sharing

Owner:

Ansible Business Unit, ansible-pmm-tmm@redhat.com
Sean Cavanaugh & Massimo Ferrari

List of all official Ansible content:

Red Hat Ansible Automation Platform One Stop:
https://redhat.highspot.com/items/60d29492c7143338c90b83e0?lfrm=shp.2

Red Hat
Ansible Automation
Platform

Red Hat
Ansible Automation
Platform

Introduction to cloud automation

Ansible Self-Guided Labs

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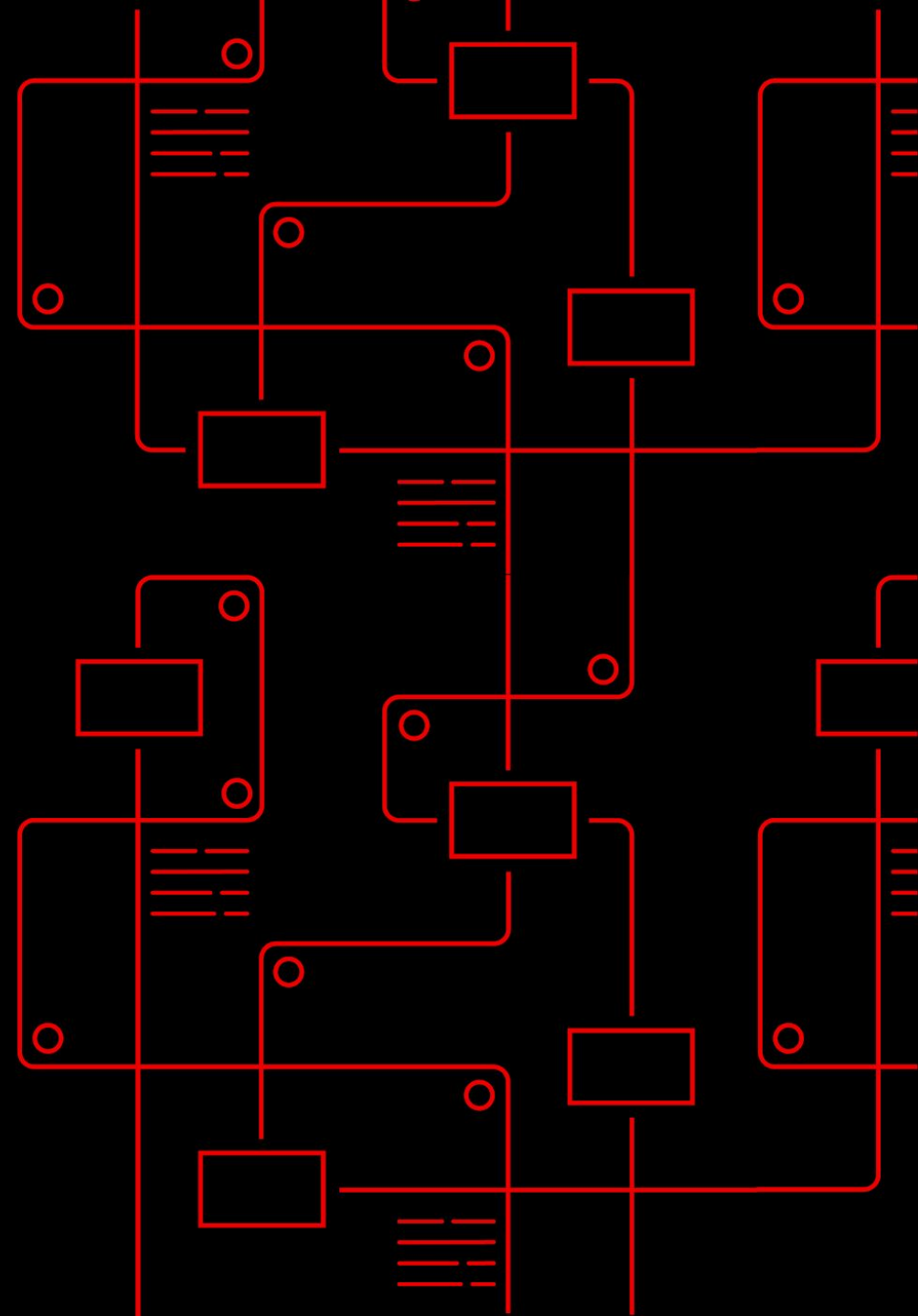
Patrick Harrison

Senior Specialist Solution Architect

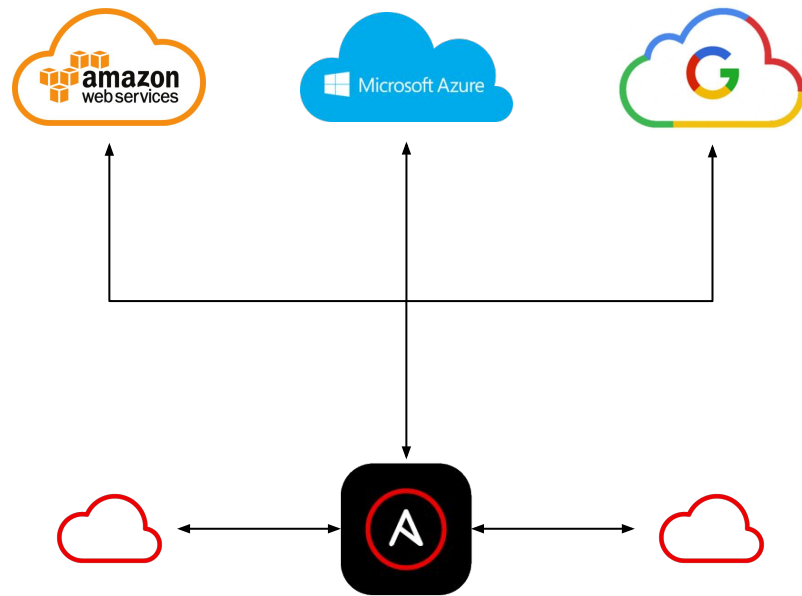# Introduction to cloud automation

01 What is Ansible cloud automation?

02 How does it work?

- **Deploying Ansible Automation Platform**

03 Use case examples

04 Next steps

Red Hat
Ansible Automation
Platform

What is Red Hat Ansible cloud automation?

Red Hat
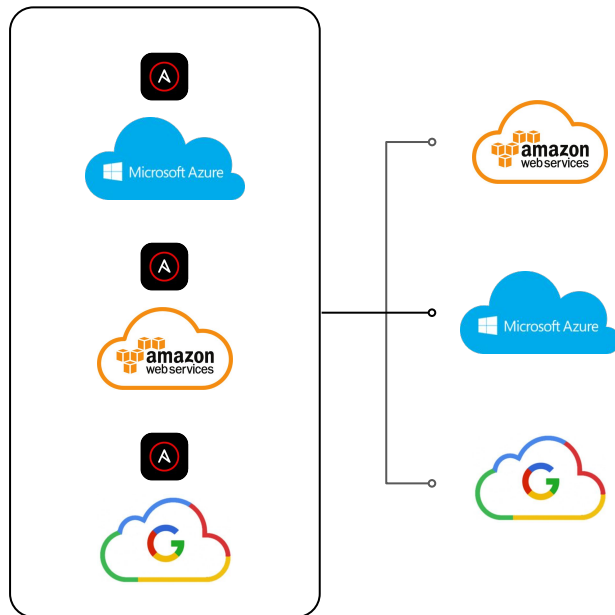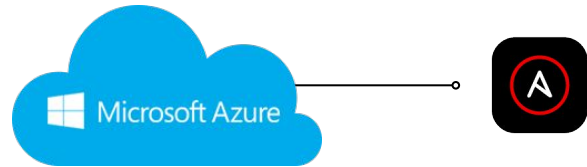Ansible Automation
Platform

What is Ansible public cloud automation?

Ansible public cloud automation is our content domain focused on public cloud and automation for organization's multi-cloud deployments.

Ansible for public clouds provides administrators and app developers with the tools and an operational framework to automate operations, manage resources as infrastructure-as-code, and better support digital transformation by connecting teams across the IT organization.

Ansible cloud automation is a set of Certified Content Collections designed to streamline and operationalize cloud operations across multiple public clouds and services

Source

Red Hat
Ansible Automation
Platform

Ansible on cloud–managed application:
Where is Ansible Automation Platform hosted?

- ▸ Runs in your cloud
- ▸ Fully installed and integrated
- ▸ Fully supported by Red Hat

- ▸ Integrated into your cloud billing
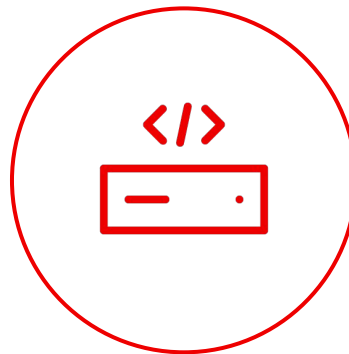- ▸ Counts toward spend agreements

Ansible for cloud:
What can Ansible Automation Platform automate?

- ▸ Cloud application deployment
- ▸ Infrastructure awareness and coordination
- ▸ Orchestration and operational tasks and more...

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Ansible Automation for the hybrid cloud
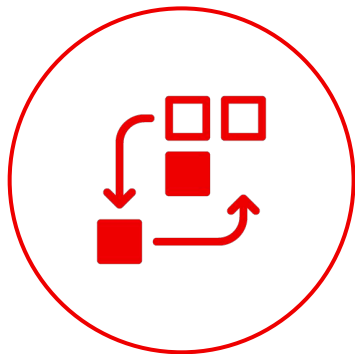
Orchestrate

Operationalize

Govern

☁ Public cloud   ☁ Cloud native   ☁ Private cloud

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Platform

Orchestrate	Operationalize	Govern

Cloud operations

Automated troubleshooting

Infrastructure visibility

Infrastructure optimization

Cloud migration

Hybrid Cloud Automation

Business continuity

Infrastructure orchestration

Compliance

Deployment and retirement

Public cloud

Cloud native

Private cloud

Red Hat
Ansible Automation
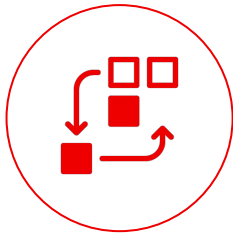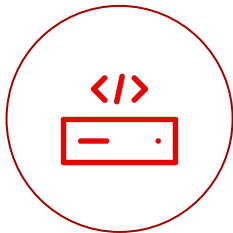Platform
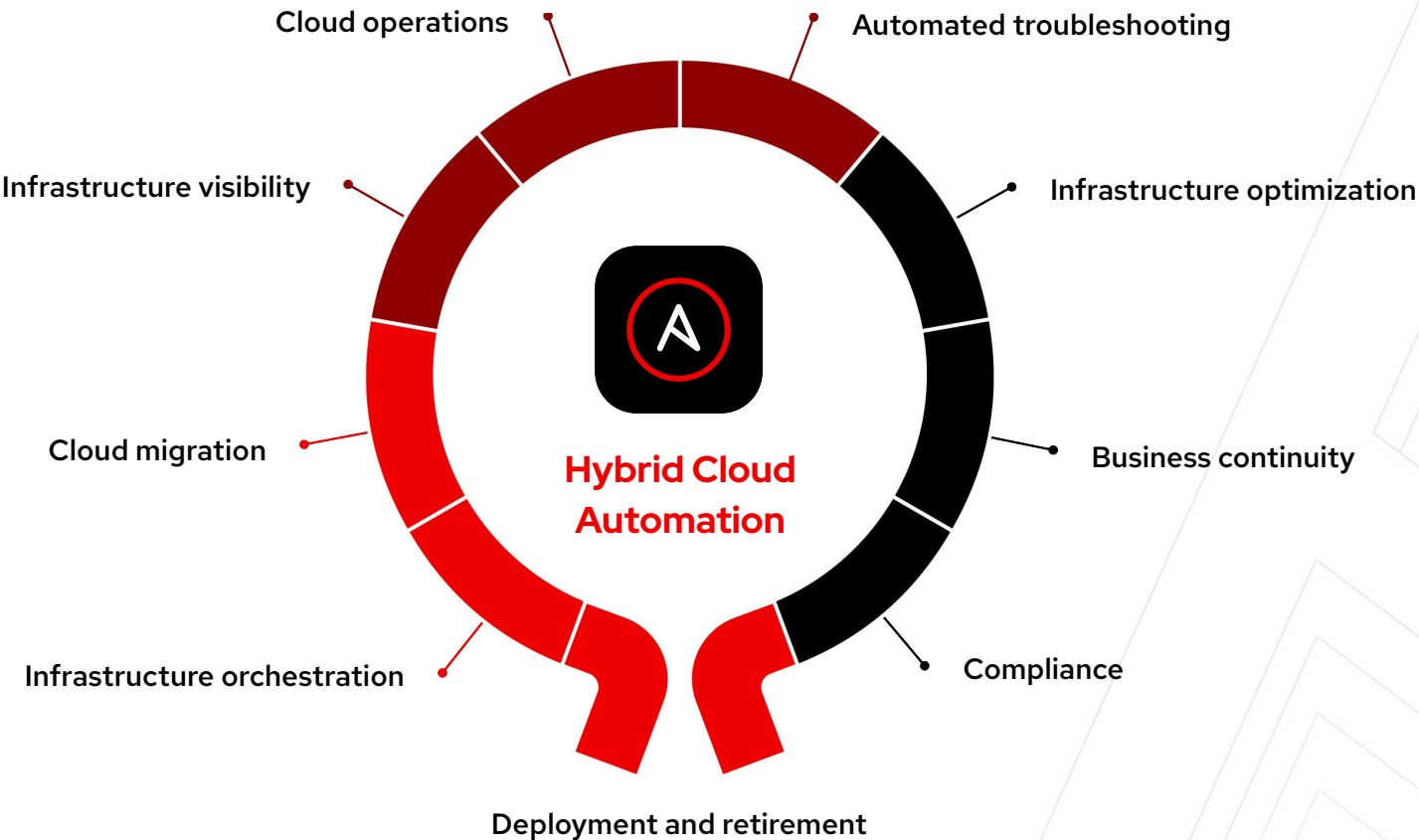
Deep diving on use-cases for cloud

Orchestrate

- ▸ Deployment and retirement
- ▸ Infrastructure orchestration
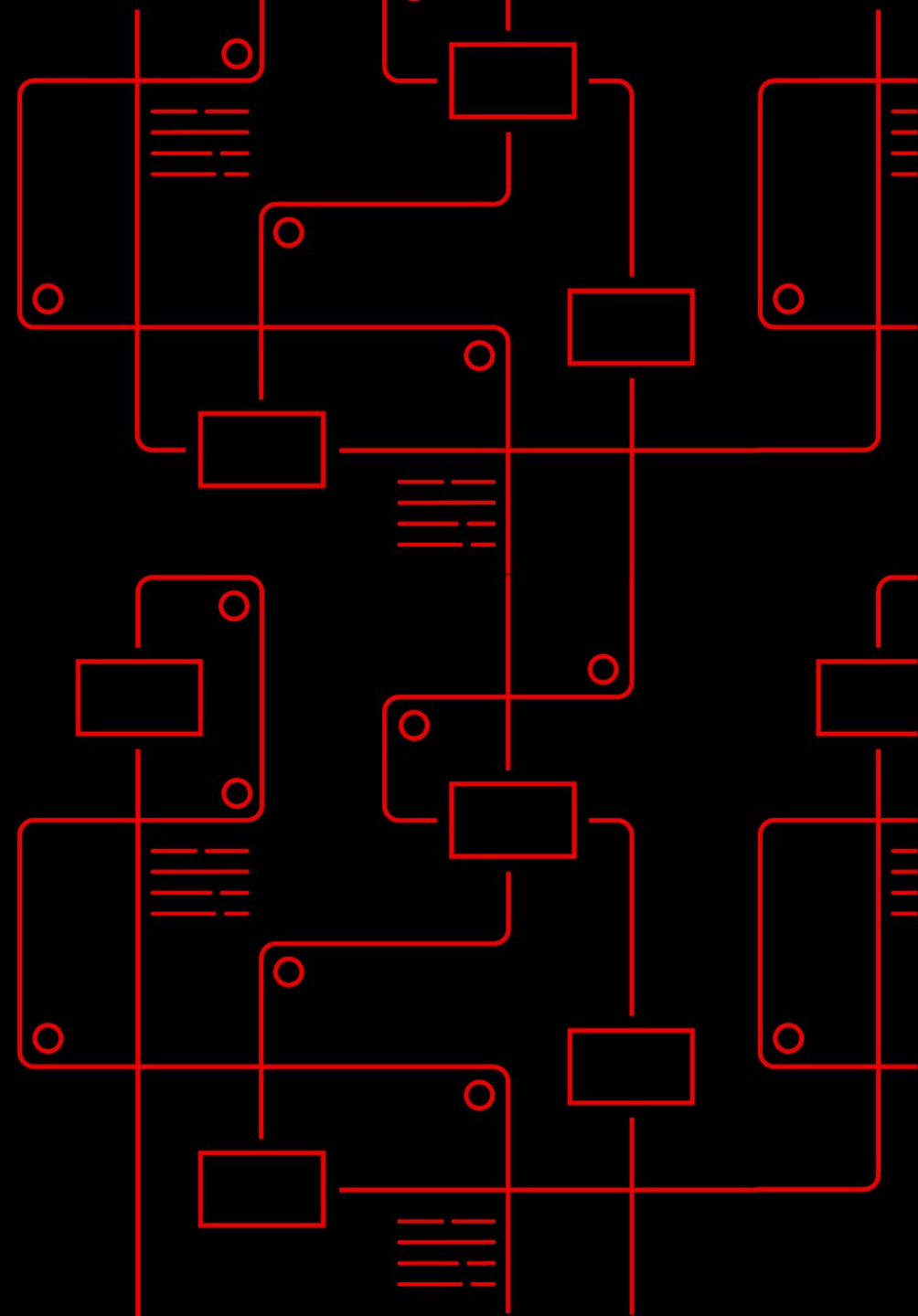- ▸ Cloud migration

Operationalize

- ▸ Infrastructure visibility
- ▸ Cloud operations
- ▸ Automated troubleshooting

Govern

- ▸ Infrastructure optimization
- ▸ Business continuity
- ▸ Compliance

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Platform

Infrastructure visibility

Red Hat
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Platform

Infrastructure visibility

Why should you choose Ansible Automation Platform for public cloud automation?

Microsoft Azure **Amazon Web Services** **Google Cloud Platform**
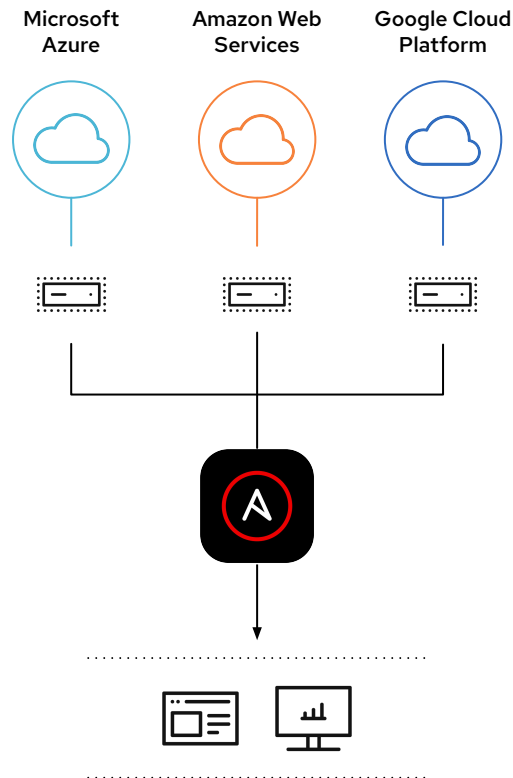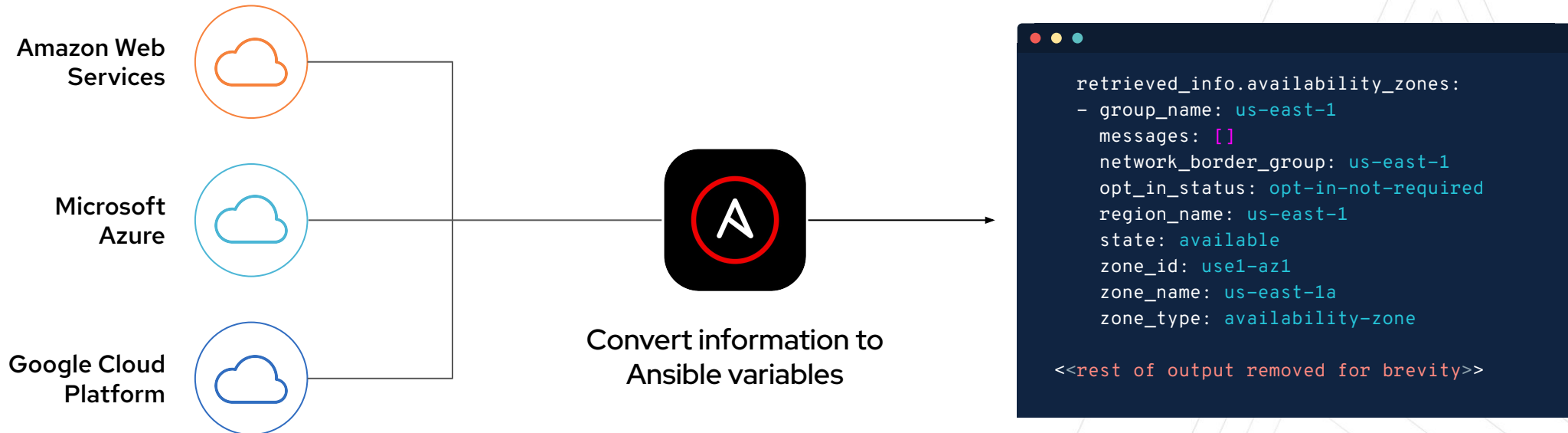
Why is it important?

▸ Read-only, no changing of production configs

▸ Understand your cloud footprint

▸ Good intro level use-case for cloud administrators
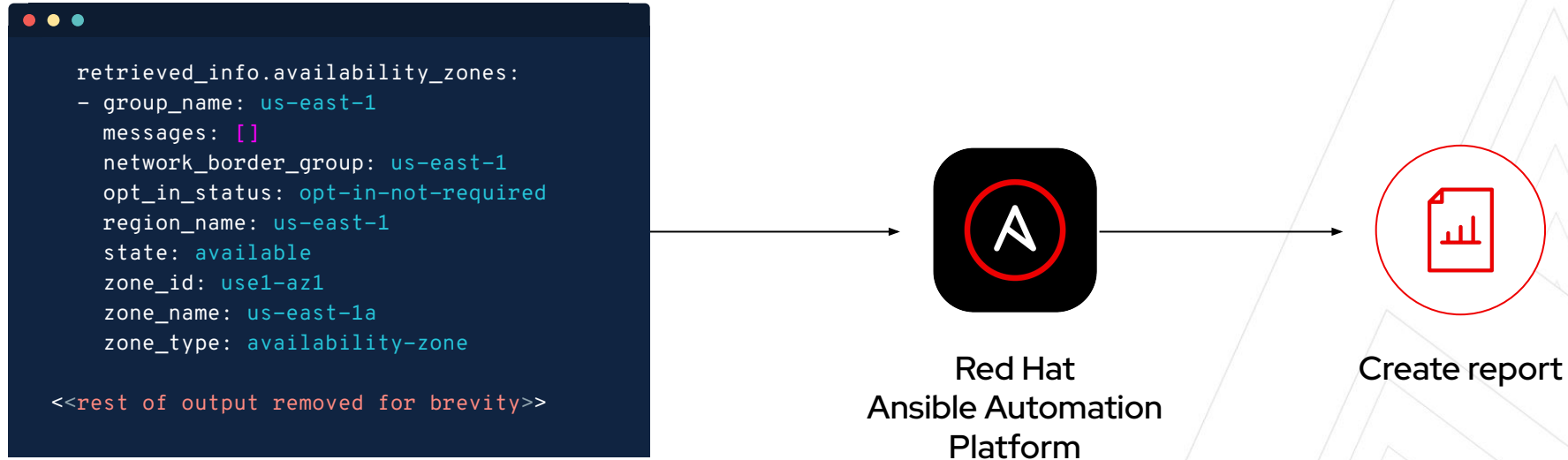
Why Red Hat Ansible Automation Platform?

▸ Push button via WebUI

▸ Easy scheduling

▸ Multi-cloud

Red Hat
Ansible Automation Platform

Cloud automation begins and ends with structured data

Public cloud resources

Amazon Web
Services

Microsoft
Azure

Google Cloud
Platform

Convert information to
Ansible variables

```
retrieved_info.availability_zones:
- group_name: us-east-1
  messages: []
  network_border_group: us-east-1
  opt_in_status: opt-in-not-required
  region_name: us-east-1
  state: available
  zone_id: use1-az1
  zone_name: us-east-1a
  zone_type: availability-zone

<<rest of output removed for brevity>>
```

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Create customized reports with flexible data outputs

```
retrieved_info.availability_zones:
- group_name: us-east-1
  messages: []
  network_border_group: us-east-1
  opt_in_status: opt-in-not-required
  region_name: us-east-1
  state: available
  zone_id: use1-az1
  zone_name: us-east-1a
  zone_type: availability-zone

<<rest of output removed for brevity>>
```

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Create report

What can I collect?

Create customized reports

Virtual instances and containers
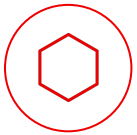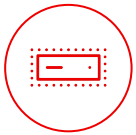
Linux   Containers   Windows   Kubernetes   Hypervisors
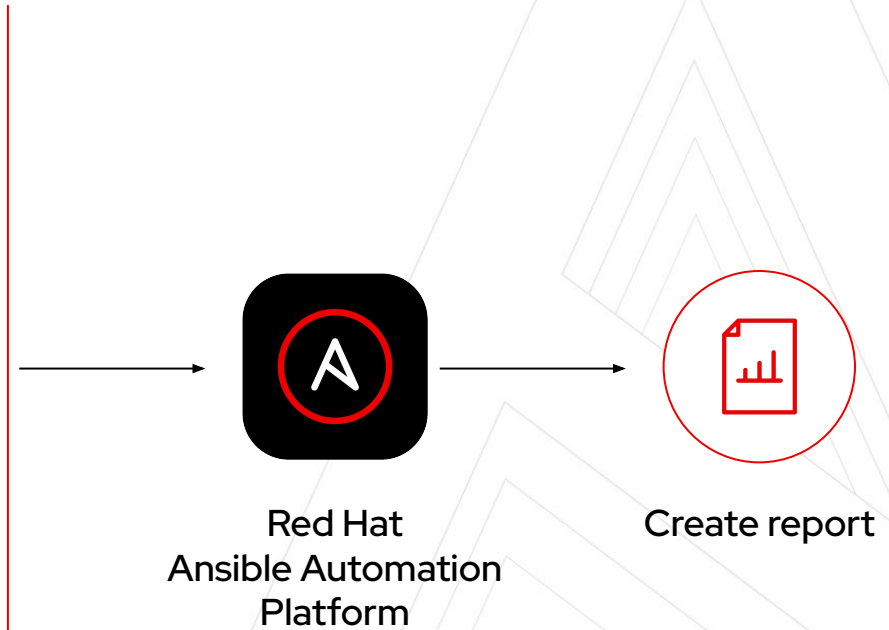
Cloud resources

Storage   Networking   Virtual firewalls   IAM   Services

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Create report

IAM: Identity and access management

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Platform

Automation controller

Clouds as code

▸ **Convert clouds** into JSON/YAML using malleable Ansible modules

▸ **View structured data** via Automation controller for easy troubleshooting

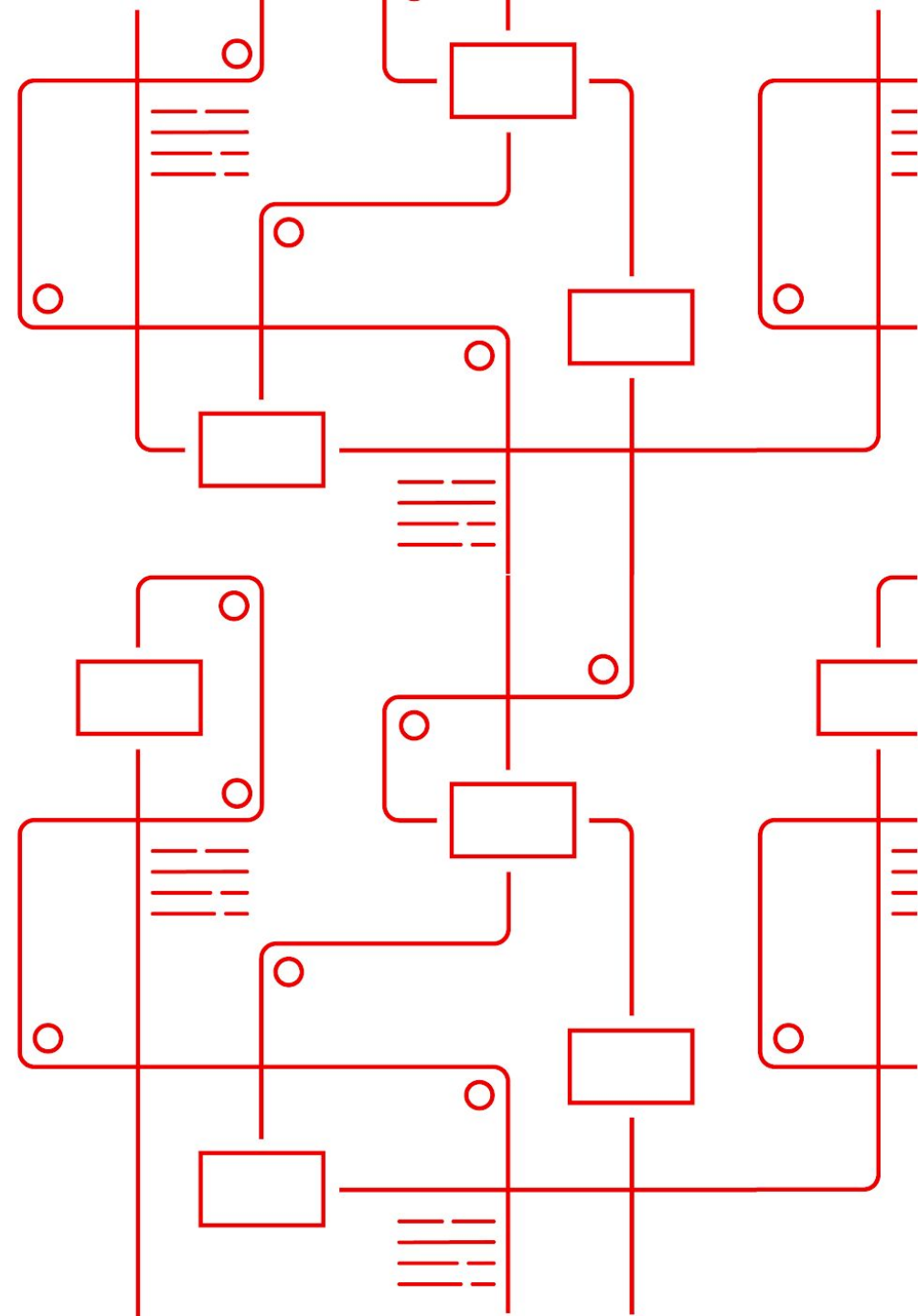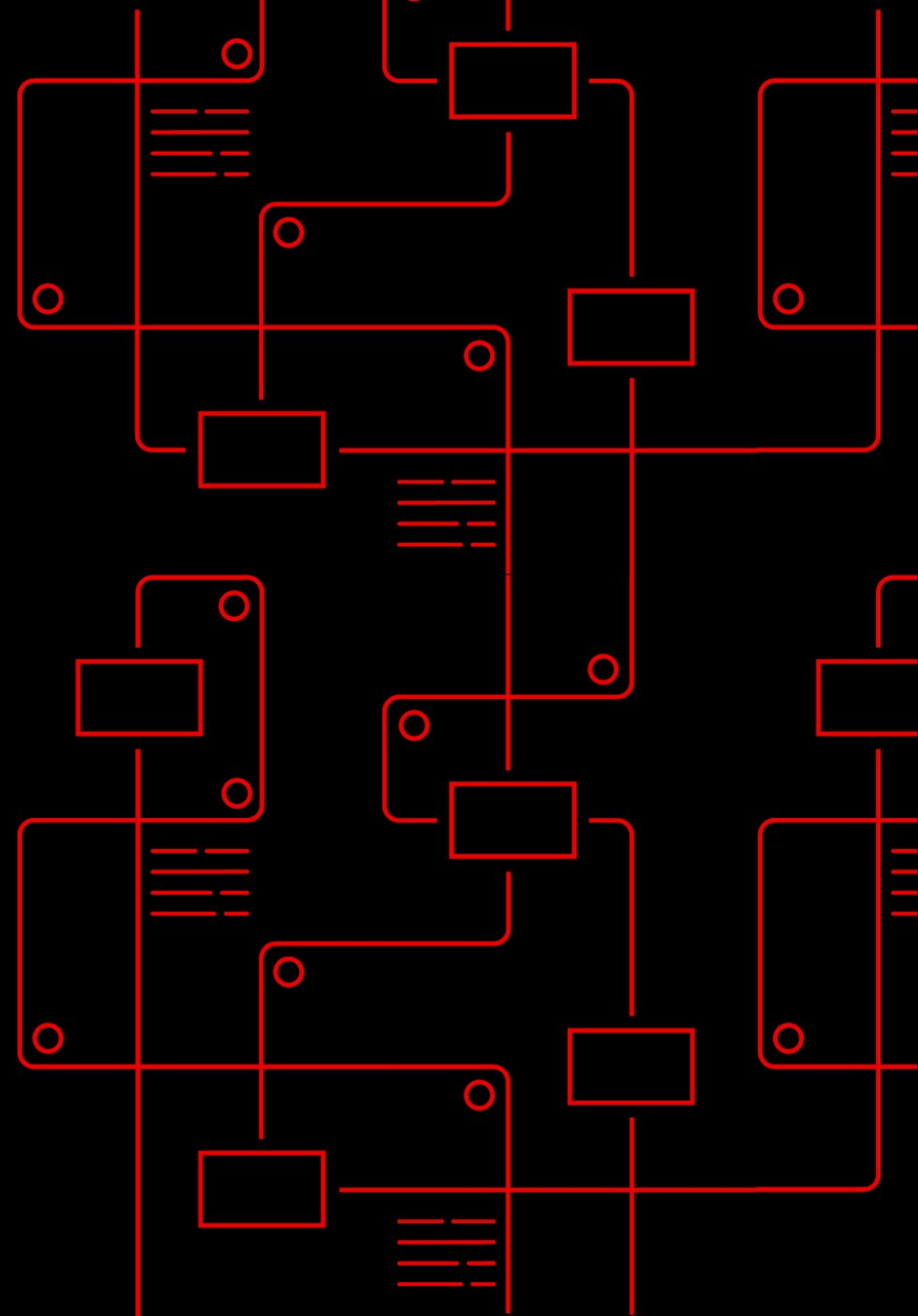▸ **Send data** to your tool of choice or simply create simple, dynamic documentation
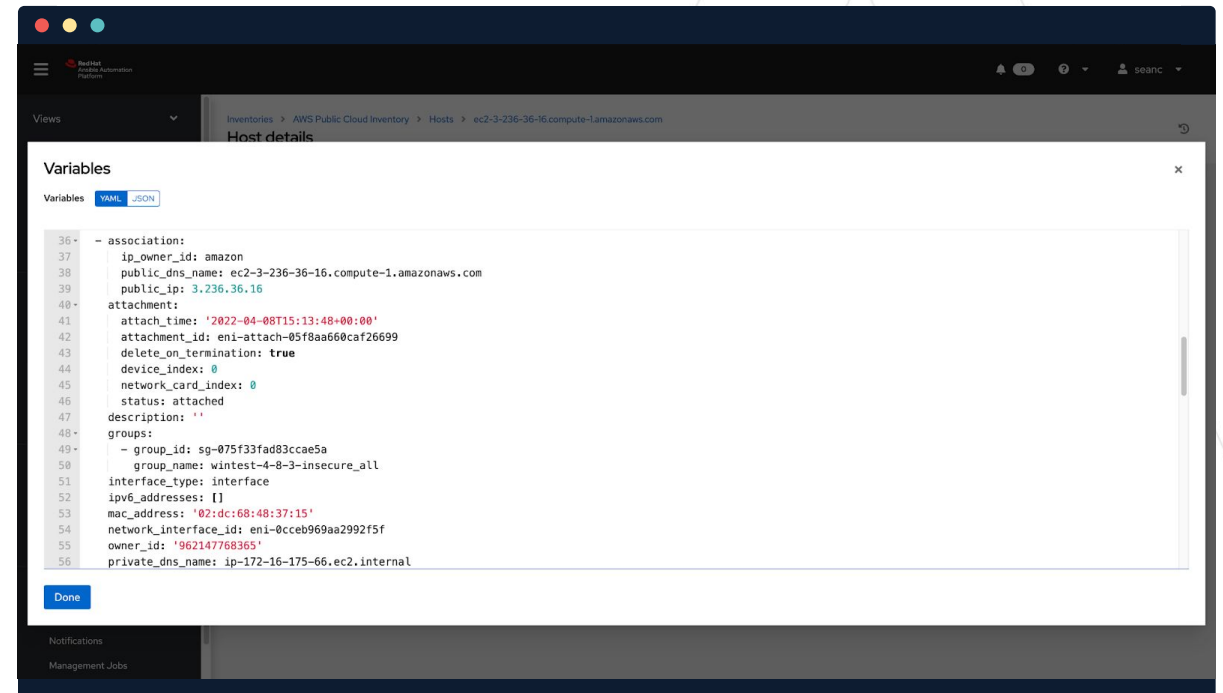
Lab Time
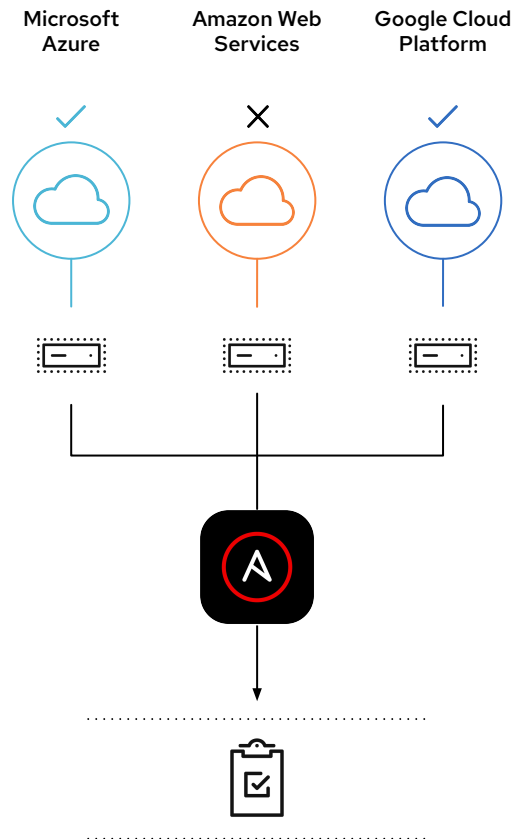## Lab 1 – Infrastructure visibility

15 Minutes

Red Hat
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Cloud operations

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Cloud operations

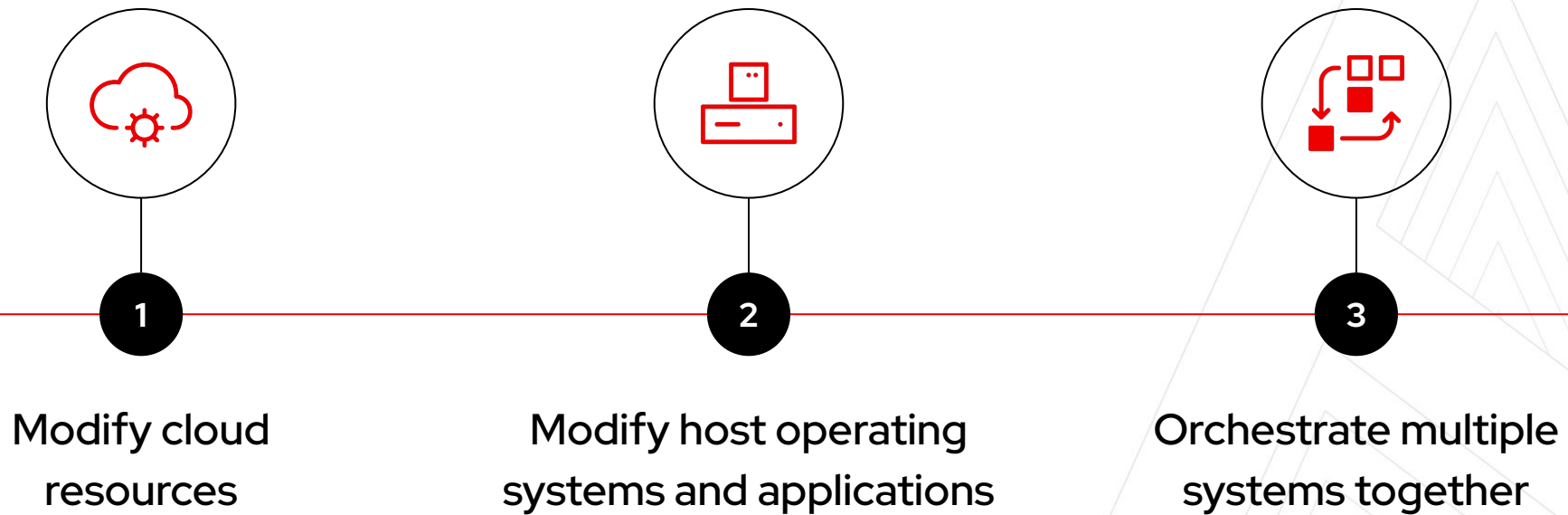**Microsoft Azure**   **Amazon Web Services**   **Google Cloud Platform**

Why is it important?

▶ Application deployments and CI/CD pipelines

▶ Life cycle management and enforcement

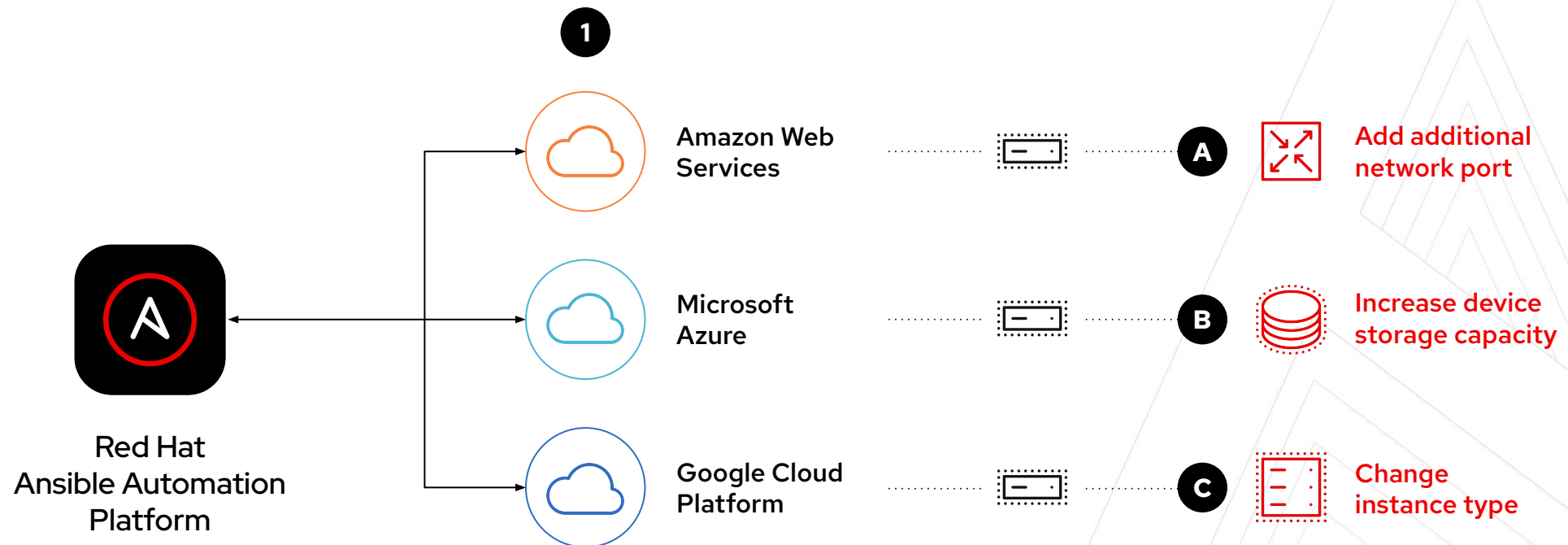▶ OS patching and maintenance

Why Red Hat Ansible Automation Platform?

▶ Works on immutable and mutable infrastructure

▶ Access to certified content for infrastructure, hybrid-cloud, Windows/Linux, application deployment, and security

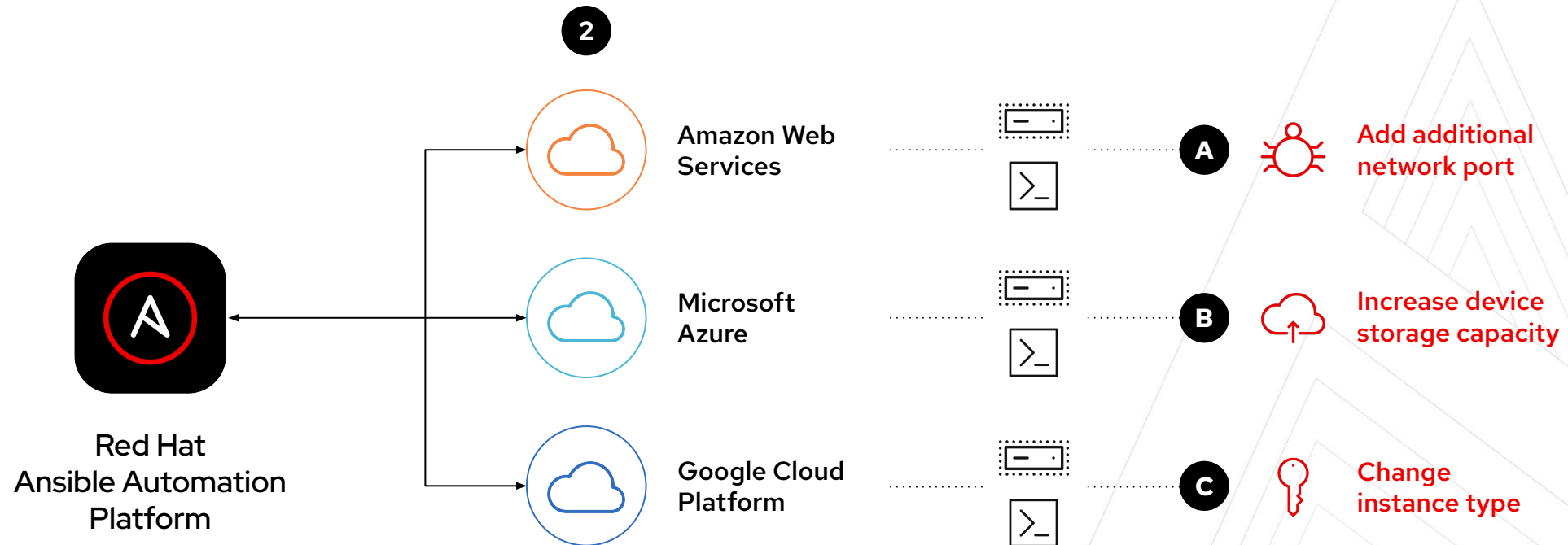▶ Turn key dynamic inventory with major public cloud providers

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Day 2 operational activities

1

Modify cloud resources

2

Modify host operating systems and applications

3

Orchestrate multiple systems together

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Modify cloud resources

Examples of day 2 operational activities

1

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Amazon Web
Services

A · Add additional
network port

Microsoft
Azure

B · Increase device
storage capacity

Google Cloud
Platform

C · Change
instance type

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Ansible Automation
Platform

Modify host operating systems

Examples of day 2 operational activities

2

Amazon Web Services

Microsoft Azure

Google Cloud Platform

A Add additional network port

B Increase device storage capacity

C Change instance type

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Platform

Red Hat
Ansible Automation
Platform

Life cycle management is more than just provisioning

Microsoft Azure

Amazon Web Services

Google Cloud Platform
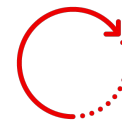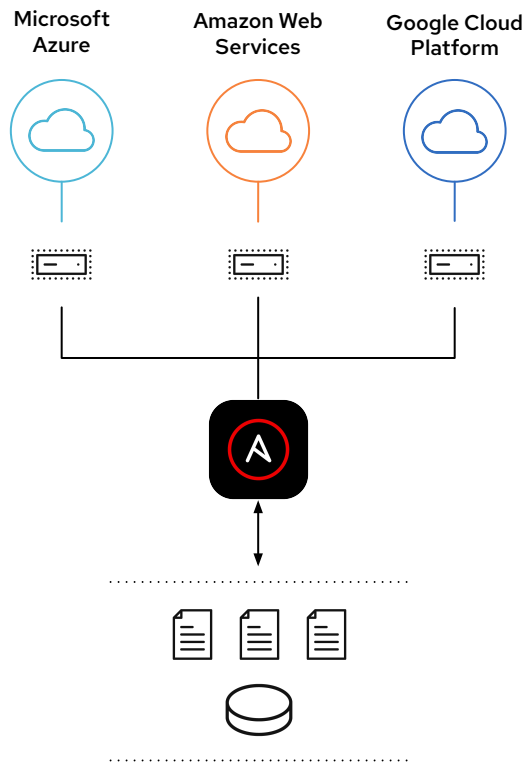
Keep systems and applications up to date
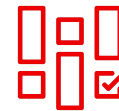
Create workflows for GitOps methodology

Validate operational state of applications

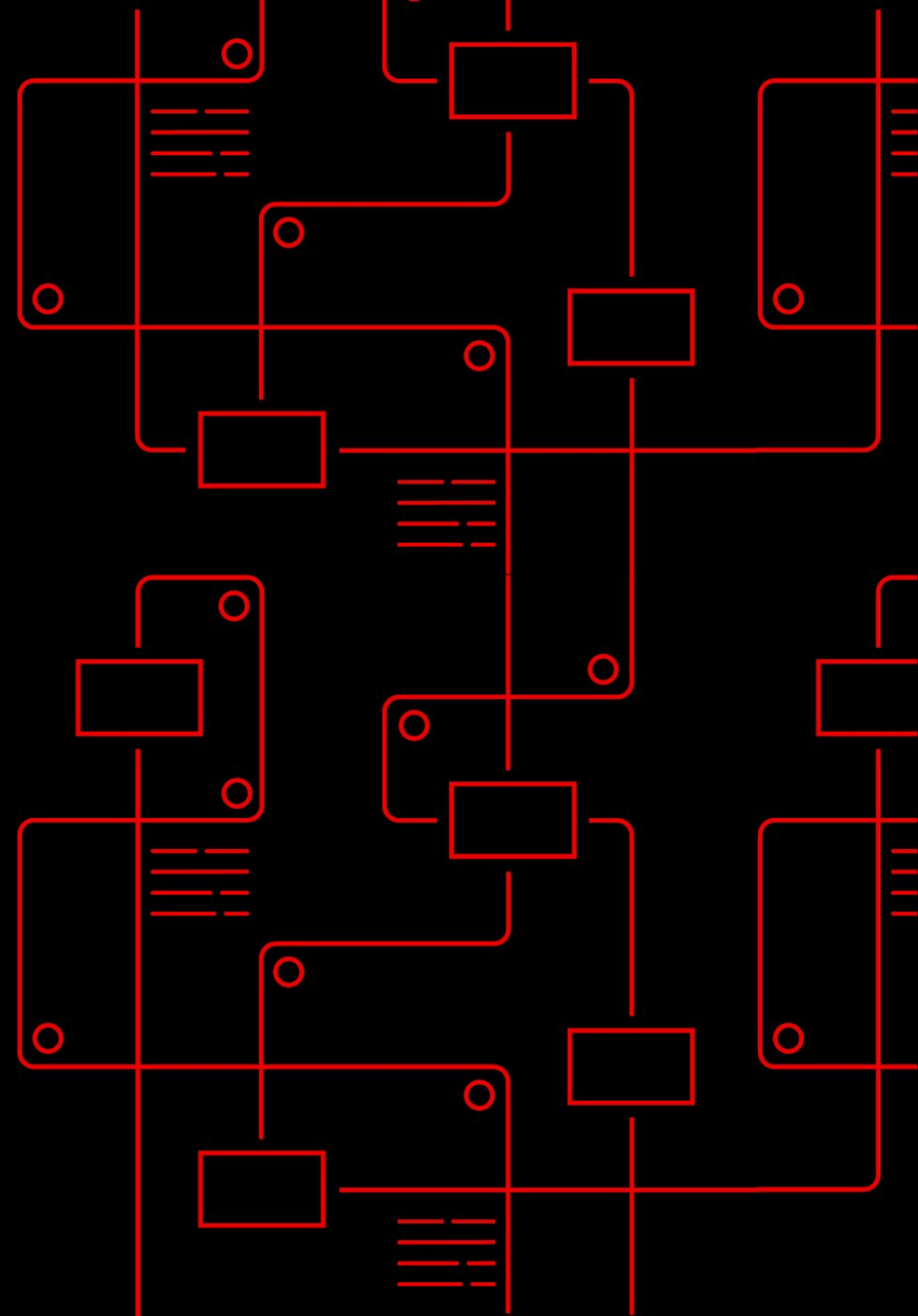**Red Hat**
Ansible Automation Platform
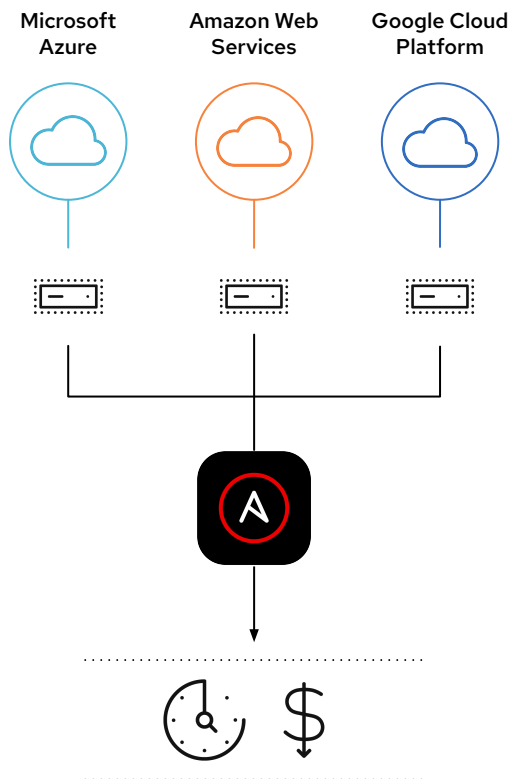
Lab Time
Lab 2 – Cloud Operations

15 Minutes

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Infrastructure optimization

Red Hat
Ansible Automation
Platform

Infrastructure optimization

Microsoft Azure

Amazon Web Services

Google Cloud Platform

Why is it important?

▸ Turn off unused resources

▸ Rightsize cloud resources

▸ Recover orphaned resources

Why Red Hat Ansible Automation Platform?

▸ Adopt automation incrementally with discrete automation jobs

▸ Schedule workflows to continually audit your clouds

▸ Use workflow approvals to understand changes before production

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Platform

Automating common operational tasks
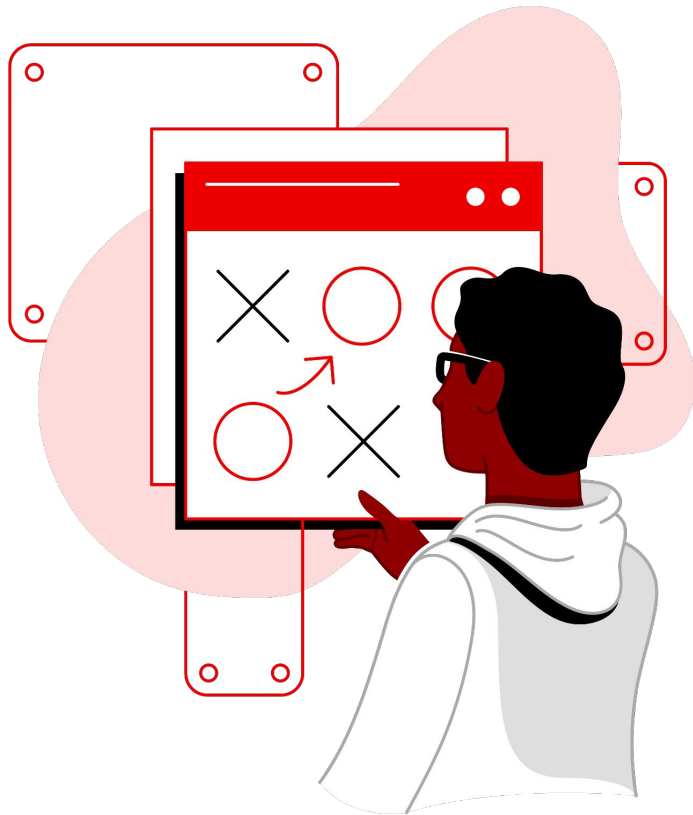
Look outside the common public cloud use–case of provisioning and deprovisioning resources and instead look at automating common operational tasks.
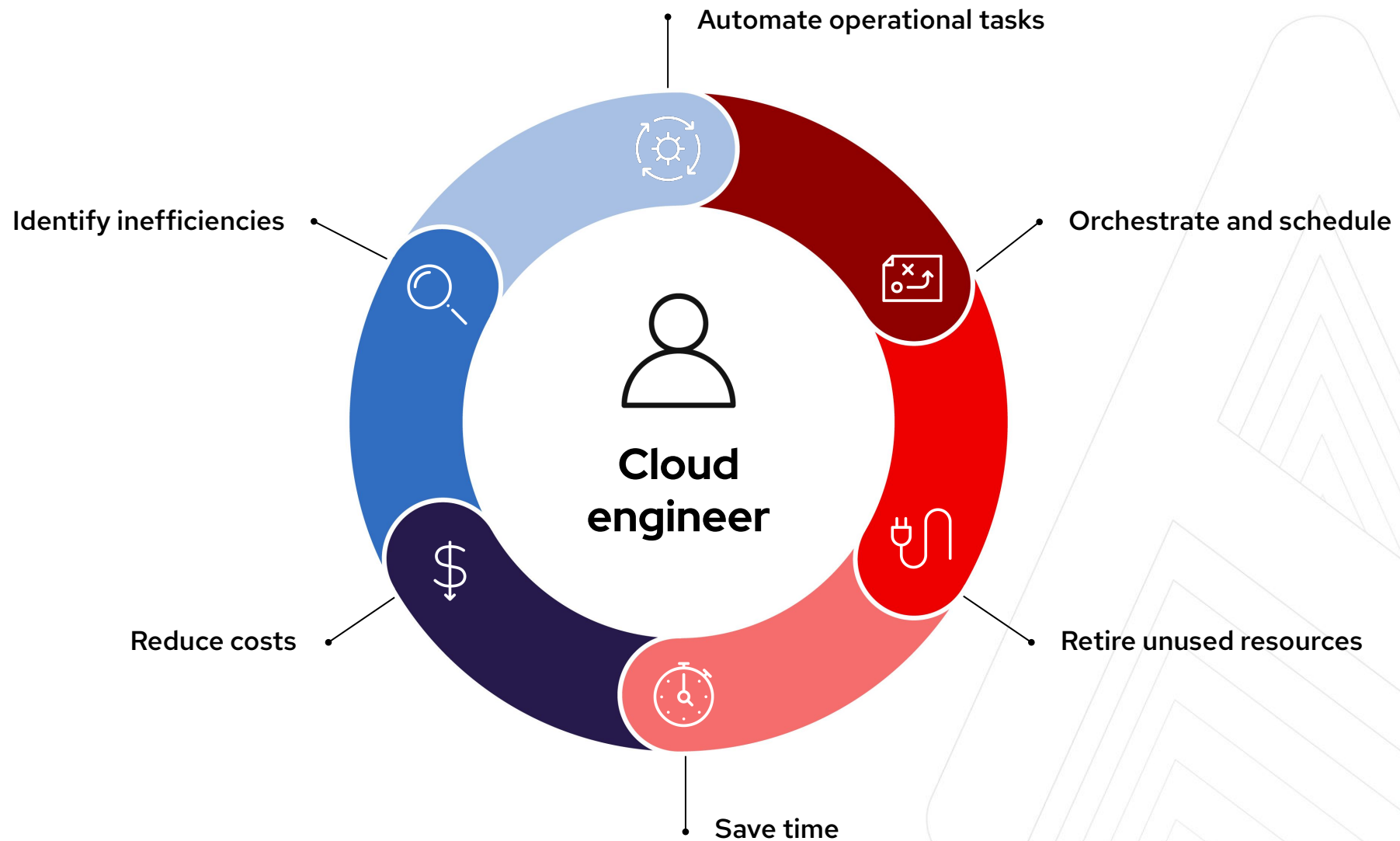
Examples of routine issues in public cloud:

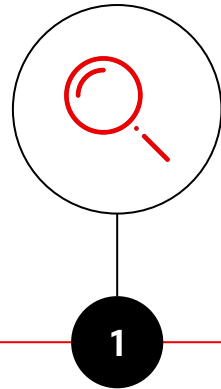Did automated testing leave resources behind and fail to deprovision?

▸ Did cloud instances get left on?

▸ Did cloud networks and subnets fail to delete?

▸ Did DNS entries fail to get recycled?
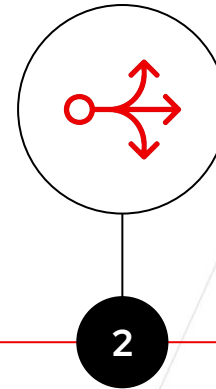
Are you using incorrect Marketplace images?

▸ Are we using inappropriate (too large or too small) instances?

▸ Are we being charged incorrectly for using software?

▸ Will EOL or subscription lapses cause outages or issues?

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Automate operational tasks

Orchestrate and schedule

Retire unused resources

Save time

Reduce costs

Identify inefficiencies

Cloud engineer

Red Hat
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Example use-cases

1

2

Automation strategy for
bespoke orphaned instances
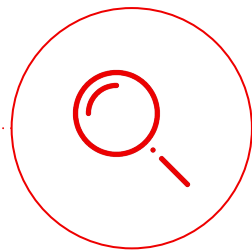
Automation strategy for
automated instances

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Automation strategy for bespoke orphaned instances

Deploy

Instance spun up outside of automation framework

Missing tags

Tagging was not setup correctly through the web console

Red Hat Ansible

Scheduled job finds orphaned instances

Alert

Sync to Slack, email, ITSM, and more to signal to cloud operators the issue

Enforce

Automatically fix issues or turn off instances out of compliance

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Automation strategy for automated instances

Failed cleanup

Application deprovisioning left cloud resources online

On too long

Ephemeral instances have been on longer than they should be

Red Hat Ansible

Scheduled job finds compliance instances

Alert

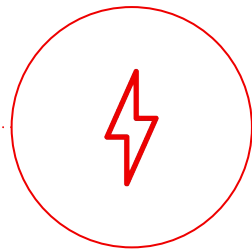Sync to Slack, email, ITSM, and more to signal to cloud operators the issue
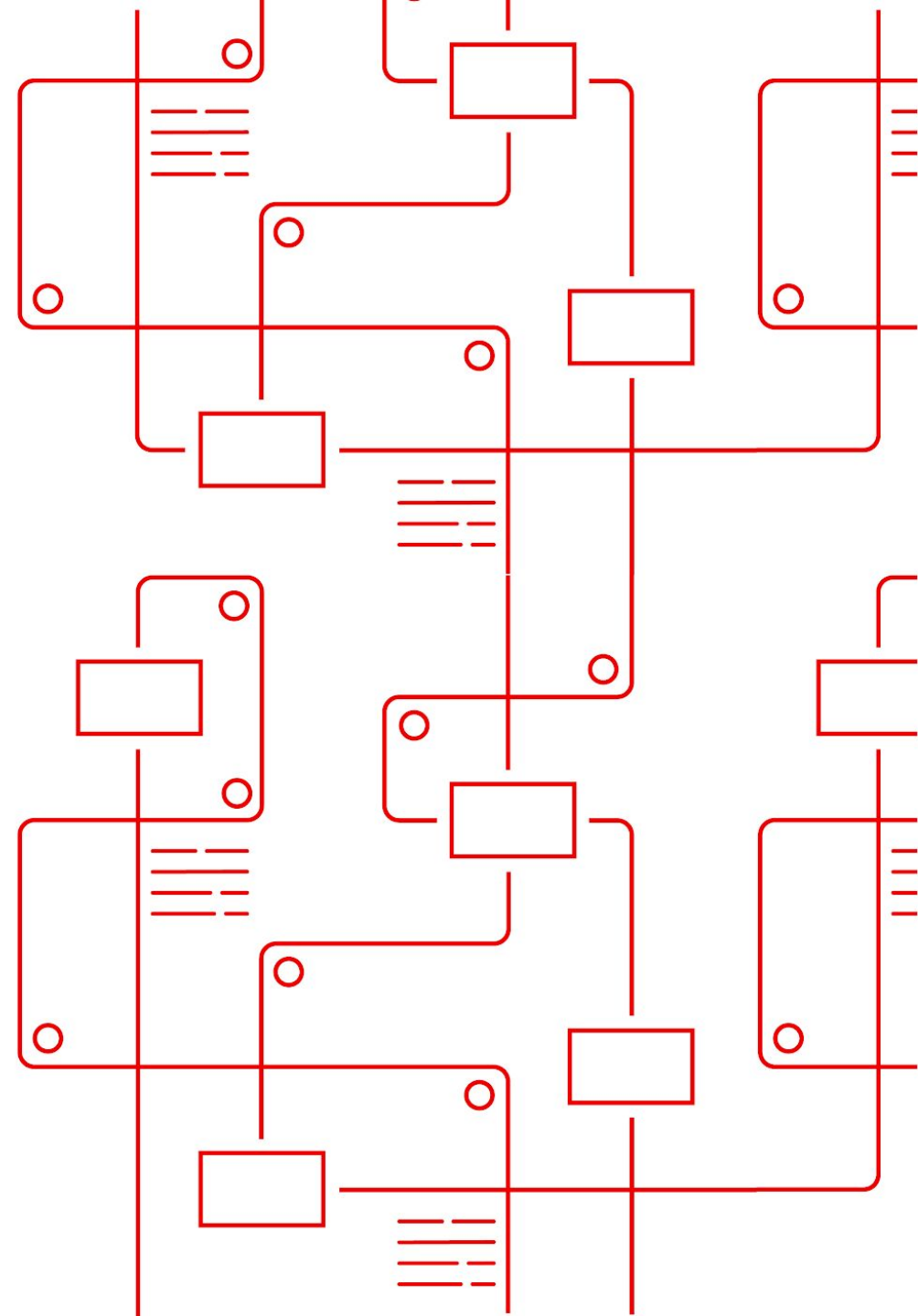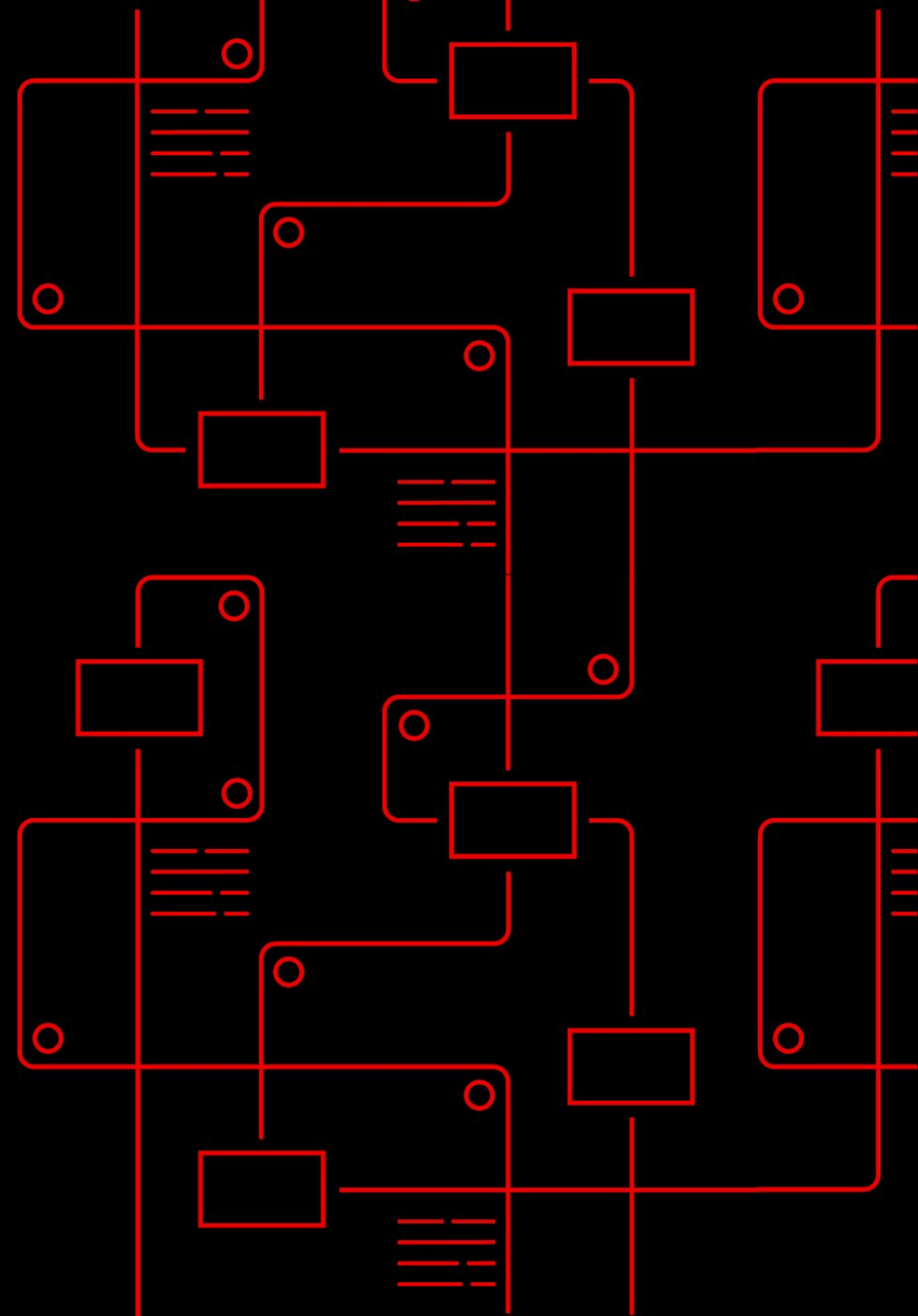
Power off

Clean up instances and resources

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Lab Time

Lab 3 – Infrastructure optimization

15 Minutes

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Next steps

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Learning resources

Continue your automation journey with Red Hat Ansible for public cloud automation

Ansible Automation Labs
red.ht/ansible_labs

E-book:
An IT executive's guide to automation
red.ht/automate_guide

Ansible Basics:
Automation Technical Overview
red.ht/automation_basics

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Thank you

Red Hat is the world's leading provider of enterprise open source software solutions. Award-winning support, training, and consulting services make Red Hat a trusted adviser to the Fortune 500.

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facebook.com/redhatinc

twitter.com/ansible

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