

Enterprise Automation

A story about innovation

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Senior Solutions Architect

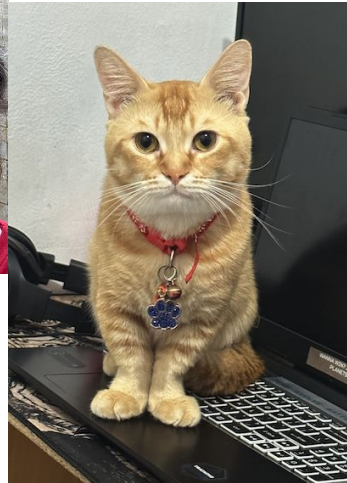
Agenda for Today

- Introduction
- Innovation capacity
- Concepts of change
- Ansible basics
- Ansible Lightspeed
- See it in action
- Q&A

Introduction to me!

Who is this guy?

- Jesse Faett Jr.
jfaett@redhat.com
- Agnes is my fiancée!
- I'm from Bloomsburg, PA
- Healthcare for ~15 years
- Federal Financials ~3 Years

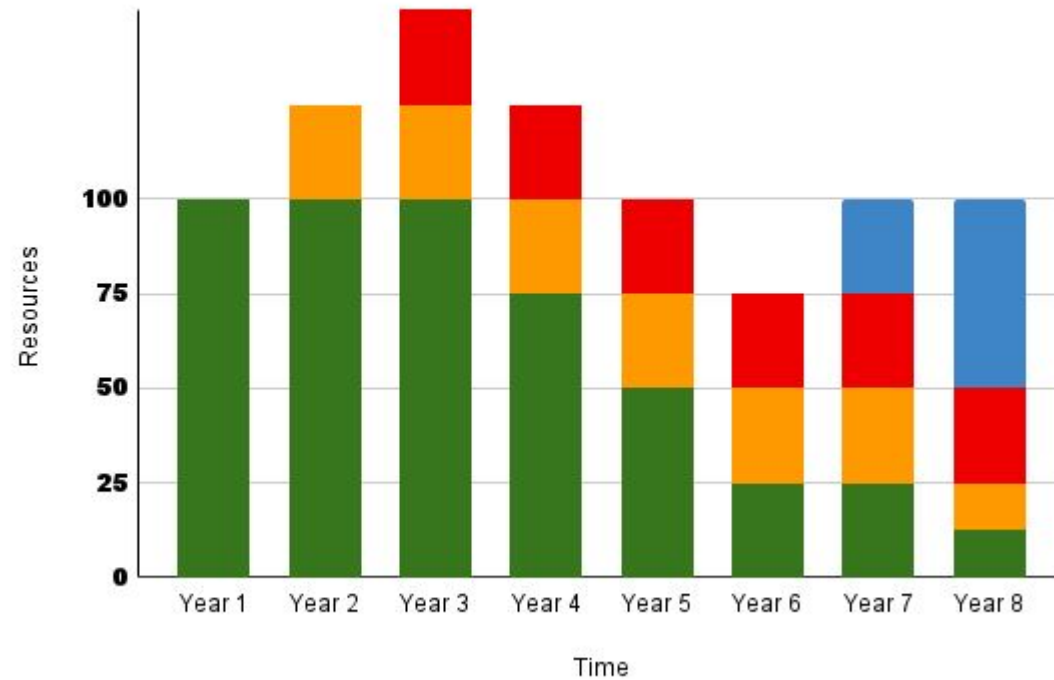


Enough about me, why are we here?

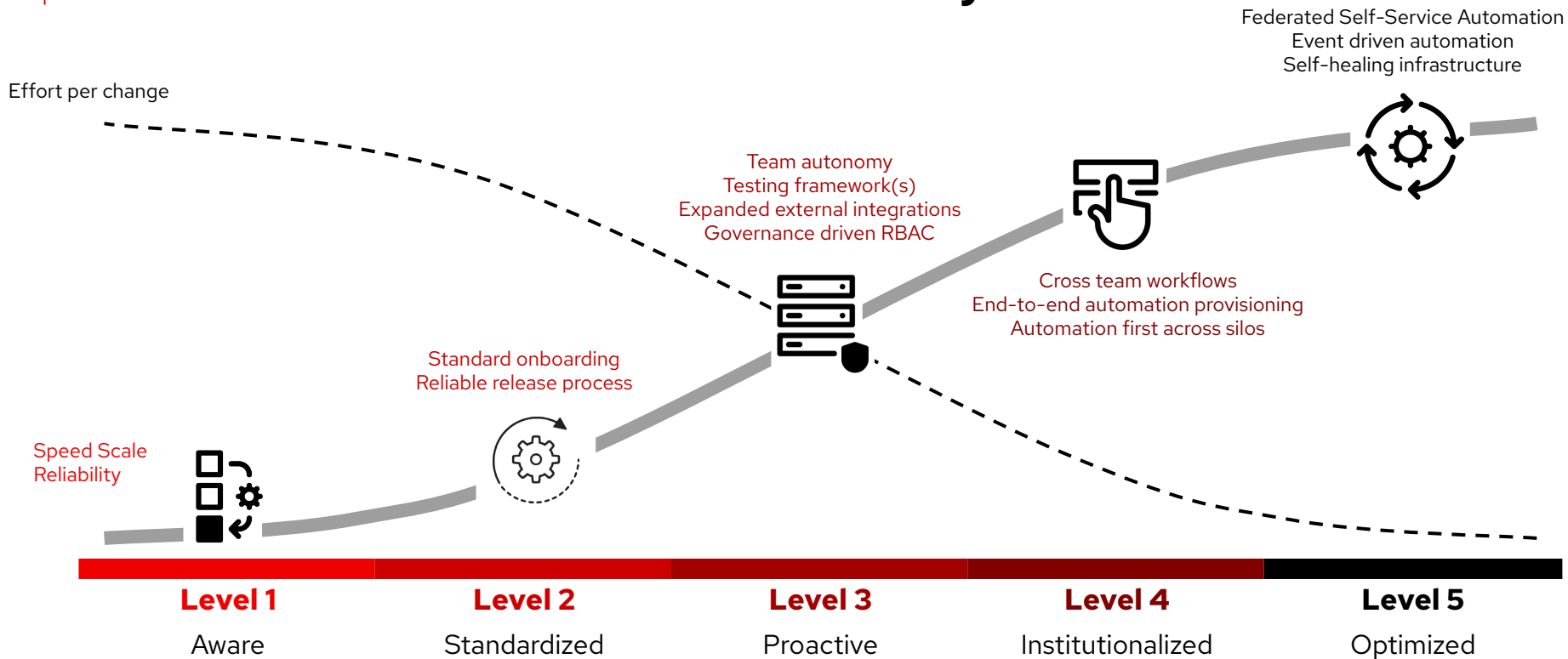
Let's look at a graph about Innovation Capacity!

Innovation Capacity

- Innovation
- Automation
- New Work
- Original Work



Automation Maturity Curve



Change can be challenging

Why change? Why now?

$$P(c) = (D * M * P) < CoDN$$

- Probability of Change
- Disatisfaction
 - Unhappy with the status quo
- Model
 - What does success look like?
- Process
 - How do I get there?
- Cost of Doing Nothing
 - What happens if I do nothing?



Some Key Contributors to Successful Change

- Coalition of the Willing
 - I've failed many things alone. I've rarely succeeded alone.
- Make it accessible
 - "Perfection is the enemy of progress" - Winston Churchill
- Data
 - Where did I start and where did I end up?



Ansible Automation Platform

Key Components



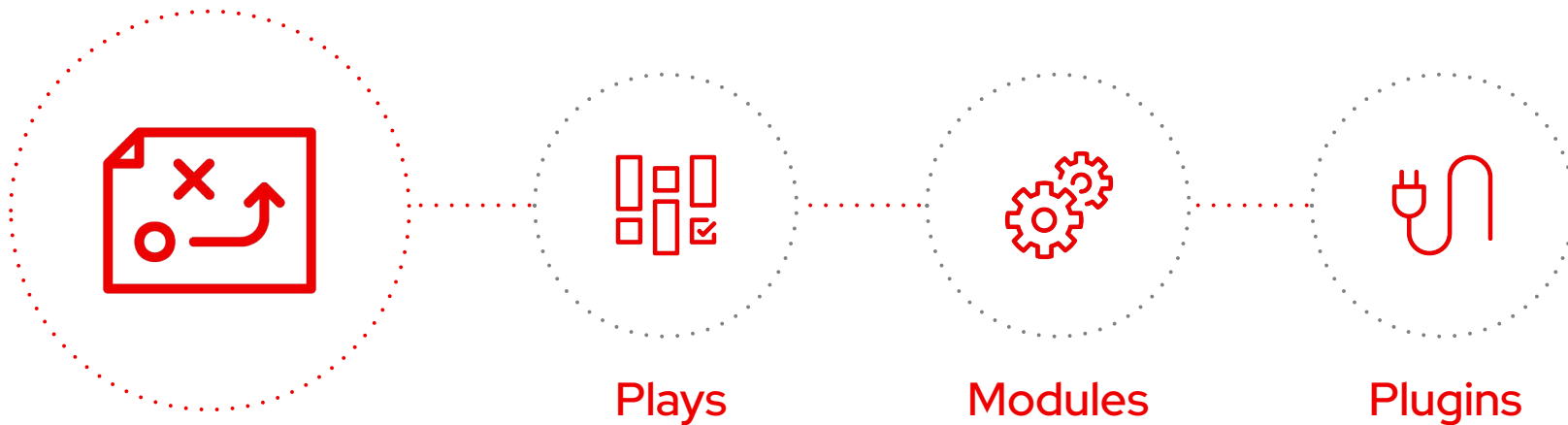
Ansible Core (**ansible-core**)

What is it?

- ▶ The main building block for Ansible
- ▶ Simple YAML syntax to develop Ansible Playbooks
- ▶ Provides CLI tools to develop, test and run playbooks
- ▶ Pluggable architecture that allows extensions through Content Collections

```
---  
- name: Shutdown VM guest  
  hosts: localhost  
  gather_facts: false  
  tasks:  
    - name: Turn off specified VM guest  
      vmware.vmware_rest.vcenter_vm_guest_power:  
        state: shutdown  
        vm: 1021343  
        vcenter_hostname: vcenter.demoredhat.com  
        vcenter_username: admin  
        vcenter_password: tedlasso
```

What makes up an Ansible playbook?





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



A play

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



A task

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




A module



```
---
- name: install and start apache
  hosts: web
  become: true

  tasks:
    - name: httpd package is present
      ansible.builtin.yum:
        name: httpd
        state: latest

    - name: latest index.html file is present
      ansible.builtin.template:
        src: files/index.html
        dest: /var/www/html/

    - name: httpd is started
      ansible.builtin.service:
        name: httpd
        state: started
```

Content Collections

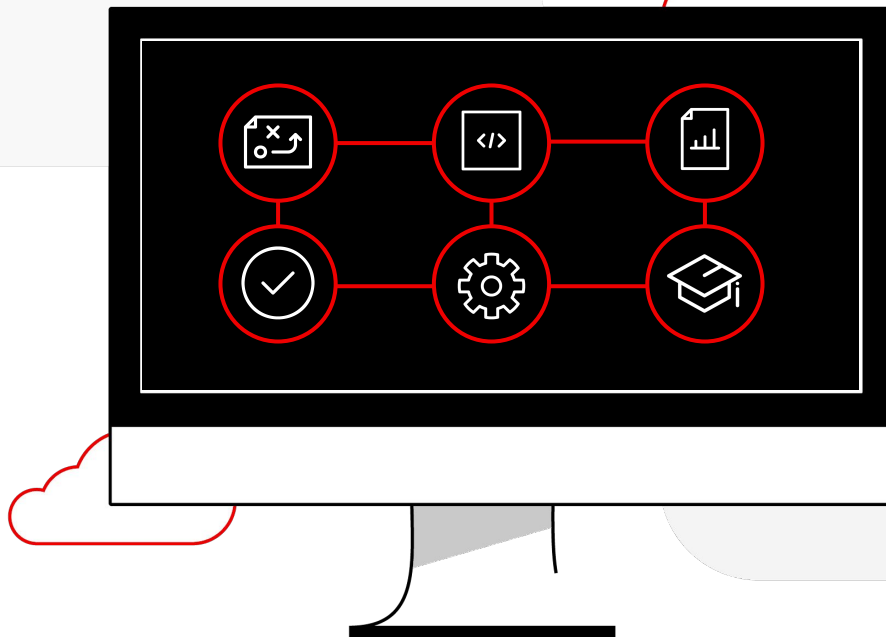
Simplified and consistent content delivery



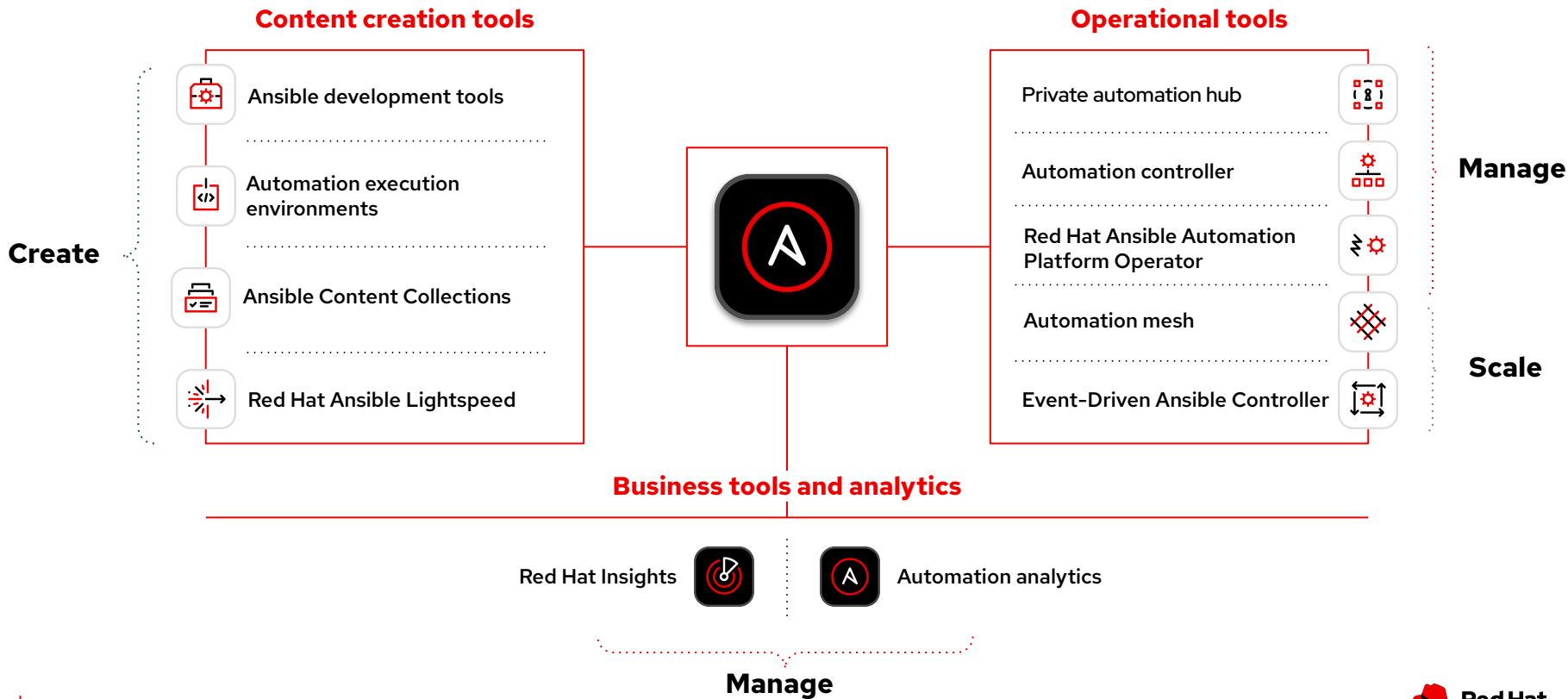
What are they?

Collections are a data structure containing automation content:

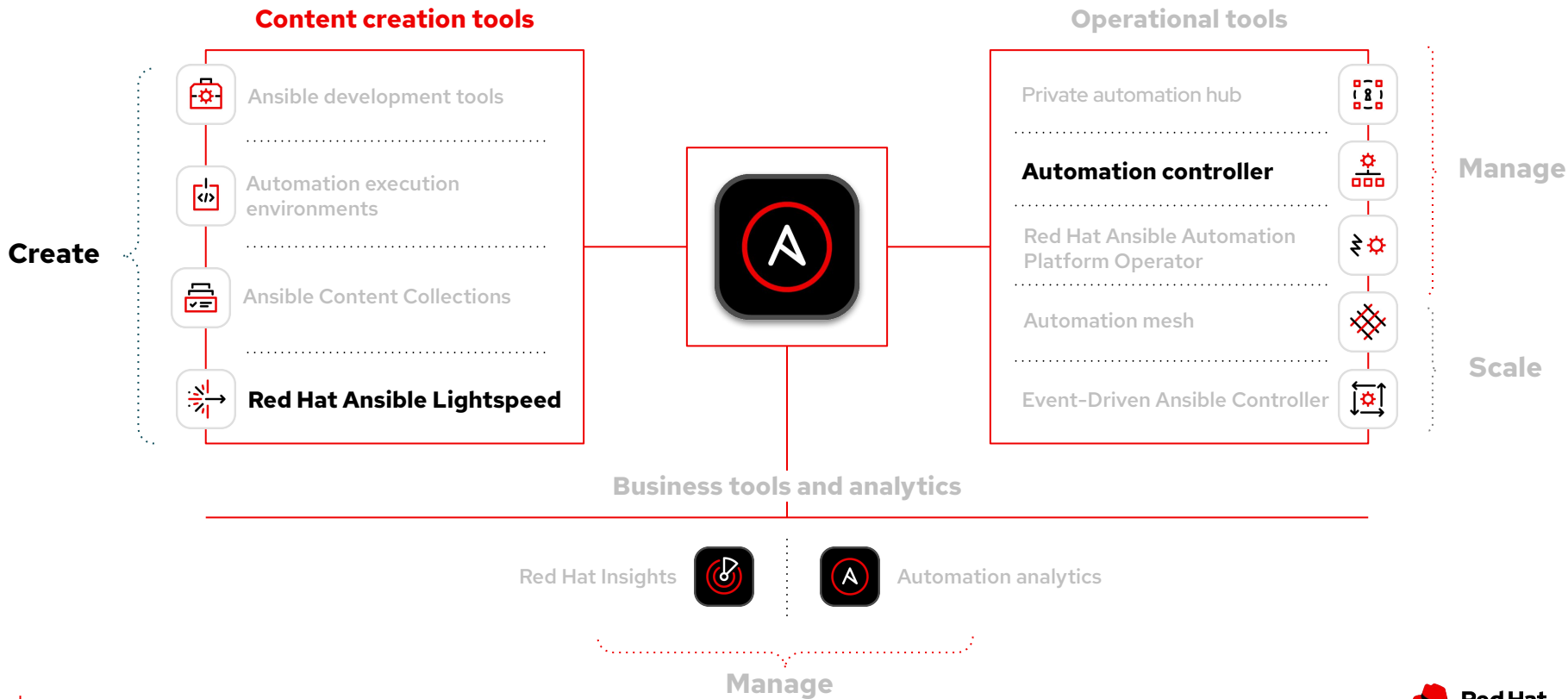
- ▶ Modules
- ▶ Playbooks
- ▶ Roles
- ▶ Plugins
- ▶ Docs
- ▶ Tests

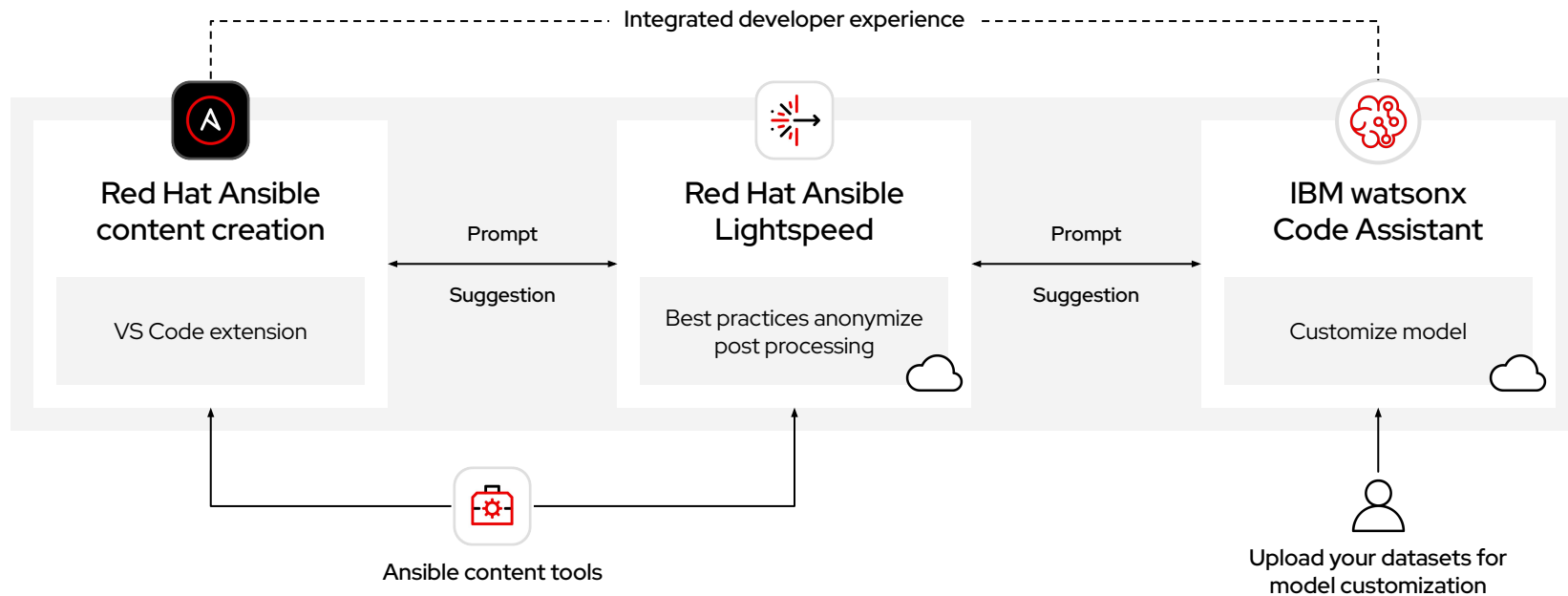


Red Hat Ansible Automation Platform



Red Hat Ansible Automation Platform

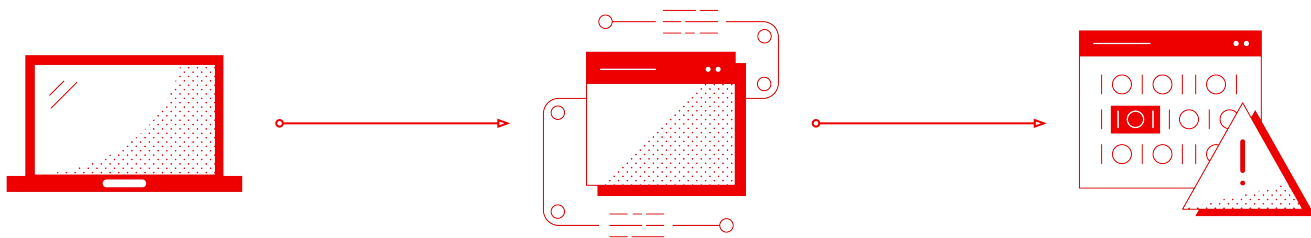




Data security

- + Prompt/Suggestion data is encrypted in transit and at rest and is ephemeral
- + Customer metadata and customized models are stored in customer-owned IBM cloud object storage and are not shared with IBM, Red Hat, or any other customers

The automation code life cycle



Create

Multi-task generation
Foundational model for Ansible

Adopt

Content source matching
Post-processing capabilities

Maintain

Ansible code bot
User management

```
configuration_postgres.yml •
playbooks > configuration_postgres.yml
1 ---
2 - name: Configure Database servers
3   hosts: databases
4   become: true
5
6   tasks:
7     # Install postgresql-server & Run postgresql-setup command & Start and enable postgresql service & Allow the traffic
```

Create

Multi-task generation

Generates multiple task suggestions for Ansible task files and playbooks with a sequential chain of natural language task prompts chained together using ampersands (&) in YAML comment (#) lines

Introduction to the scenario

Give me the background!

Company:

- We are all part of a fictitious company called **Bombastic Big Blue Bears!**
 - Just starting automation journey!

Scenario and Assumptions:

- Ansible Automation Platform is already deployed in our environment.
- Assume we've properly vetted and tested all AI generated artifacts.
- Assume all automation will run as intended.



Let's get started innovating!

Q & A

What did we talk about today?

- Innovation Capacity
- Concepts to help implement change more effectively
- Red Hat Ansible Lightspeed
- A tried and tested process for implementing automation within an organization

Reference Materials



- [GitHub Repo for this presentation](#)
- [Red Hat Ansible Lightspeed overview page](#)
- [Getting Started](#)
- [Interactive 101 Ansible Lightspeed Lab](#)
- [Ansible Interactive Labs](#)
- [Red Hat Ansible Lightspeed with IBM watsonx Code Assistant User Guide](#)
- [Red Hat Ansible Lightspeed documentation page](#)
- [Red Hat Ansible Lightspeed playlist](#)
- [Anthem Video](#)

Thank you

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