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Embracing this exciting era of generative AI

Unleash the Power of Ansible with Lightspeed!

Fabio Alessandro "Fale" Locati

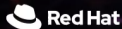
EMEA Associate Principal Specialist Solutions Architect, Red Hat

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TOC



Why Automation?

Automation + generative AI

The Red Hat Ansible Lightspeed experience

Roadmap



About me



- Working in IT since 2004, mostly in consulting roles
- Ansible user since 2013
- Author of 5 books, 4 of which on Ansible:
 - Learning Ansible
 - Practical Ansible
 - Learning Ansible 2.7
 - Practical Ansible - Second Edition
- EMEA Associate Principal Specialist Solution Architect @ Red Hat
- RHCA V



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Why Automation?



**Automation happens when one
person meets a problem they
never want to solve again**

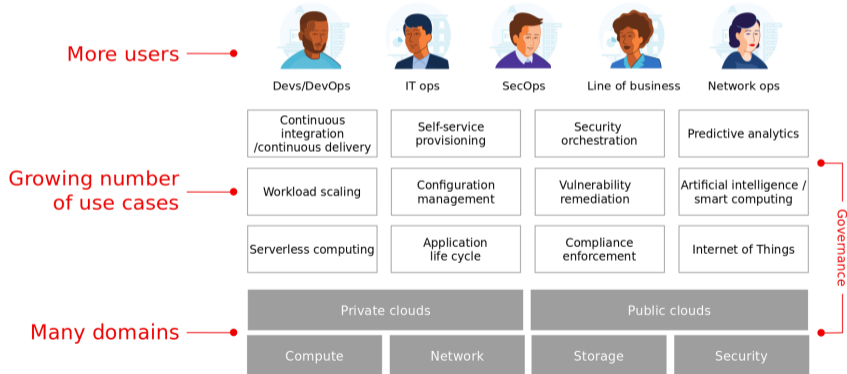
Anyone can automate...
but an enterprise needs
to coordinate and scale



Automate in an integrated way



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Why is not everything automated?



- Too much time required to automate processes
- Not enough people are able to create automation
- Difficult to find and reuse code



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Automation + generative AI

Generative AI has the potential to transform enterprise automation



- **Enhance productivity:** With AI-generated code recommendations that are more accurate, more reliable, and integrated into your automation developers' existing Ansible workflows.
- **Expand who can create:** By reducing barriers to entry for automation code creation, and empowering automation SMEs with basic coding knowledge to translate their expertise into clean, compliant YAML code for Ansible Playbooks.
- **Extend trust and compliance:** With an automation code base that adheres to accepted Ansible best practices, options to customize data models, and significant data safeguards in place.

Generative AI raises a number of questions



- **Where** is generated code coming from?
- Can companies trust that their **private data** is protected?
- What exactly are data **models being trained on** – and by whom?

Ansible Lightspeed with IBM Watsonx Code Assistant



- Generative AI solution
- Engineered to help individuals, teams, and organizations automate faster
- Integrating developer tooling
- Access to Ansible-focused foundation models
- Red Hat + IBM automation expertise
- Ansible Lightspeed streamlines and enhances the Ansible content creation experience



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The Red Hat Ansible Lightspeed experience



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Demo

What have we seen



- **Generate tasks** for a playbook or role from natural language task description
- The suggestions will be influenced by the **context**
- Each suggestion will include **potential source, its author and license**
- Ansible Lightspeed's **post-processing** capability augments model suggestions with Ansible best practices, subject matter expertise, and more

Ansible Lightspeed Tech Preview



- Available now to **everyone, for free**
- Capable of **task generation**
- This is a **self-supported service**



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Roadmap

Red Hat Ansible Lightspeed capabilities



```
> Generate  
playbook content  
from a natural  
language request
```

**Content
Generation**

```
> Find me a  
playbook or role  
similar to what  
I'm writing
```

**Content
Discovery**

```
> Review my  
playbook and  
help make it  
better
```

**Content
Optimization**

```
> Tell me what  
this playbook is  
doing - and it's  
impact
```

**Content
Explanation**

Features on roadmap for 2024

Ansible Lightspeed roadmap



Now

- **Ansible Task Generation**
Use natural language in an Ansible Task description to generate a contextual suggestion.
- **VS Code Extension**
Access through the Ansible VS Code extension
- **Technical Preview**
Use the service for free through the technical preview

Near term

- **Full playbook generation**
Generate multiple related tasks from a single prompt to create full playbooks
- **Content Monitoring and Improvement**
Monitor Ansible content repositories for improvements and receive automatic pull requests
- **REST APIs**
Integrate CI/CD pipelines, developer tools, and other systems
- **Model Fine Tuning**
Use watsonx Code Assistant to create custom Ansible recommendation models

Long term

- **Content Discovery and Matching**
Find existing Ansible content instead of writing from scratch
- **Content Description**
Generate descriptive documentation about the automation you build
- **Content Controls**
Specific controls around data sent to Ansible Lightspeed
- **New User Interfaces**
Web-based, CLI, and other code editors
- **Custom Post-Processing**
Parse unstructured data into structures
- **Rulebook Recommendations**
Support recommendations for Event-Driven Ansible



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Questions?

Fabio Alessandro "Fale" Locati
fale@redhat.io



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Thank You