

From Zero To Hero How To Build The Ansible Pilot Community

23 Sep 2024 – Luca Berton

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Who is Luca Berton?

π Ansible Automation Expert
Based in the NL

15 years System Administrator
Infrastructure Hardening and
Automation

Open Source Enthusiast



Nice to Meet You

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Ansible Pilot



4

Books



+

Events

Sep '24 Ansible London **GB**
Feb '24 New Delhi Book Fair **IN**
Dec '23 Cloud Native London **GB**
Sep '23 Ansible Community Day **DE**
Jul '23 Ansible Automates London **GB**
Jun '23 DevConf.cz **CZ**
Jun '22 PGMeetUp Bari 2022 **IT**
Feb '22 Ansible Anwendertreffen **DE**

Demo GenAI Ansible

Deploy a GenAI
Retrieval-Augmented
Generation (RAG) system that
connect with Neo4j Graph
database that interact in
ChatGPT interface with **Ansible**.

<https://www.ansiblepilot.com/articles/setting-up-neo4j-genai-environment-on-fedora-using-ansible/>

```
mode: '0644'
```

- **name:** Create application directory
 ansible.builtin.file:
 path: /opt/neo4j_genai
 state: directory
 mode: '0755'
- **name:** Copy Python application to the server
 ansible.builtin.copy:
 src: files/application.py
 dest: /opt/neo4j_genai/application.py
 mode: '0755'
- **name:** Run the Neo4j GenAI application
 ansible.builtin.command: python3 /opt/neo4j_genai/application.py
 environment:
 OPENAI_API_KEY: "{{ openai_key }}"
 NEO4J_URI: "{{ neo4j_uri }}"
 NEO4J_AUTH0: "{{ neo4j_auth.split(':')[0] }}"
 NEO4J_AUTH1: "{{ neo4j_auth.split(':')[1] }}"
 register: application_output
 ignore_errors: true
- **name:** Debug application output
 ansible.builtin.debug:
 var: application_output.stdout_lines

Q: What is the **ID** and **price** of the product **Queso Cabrales**?

A: The ID of the product **Queso Cabrales** is **'11'** and the price is **21.0**.

Northwind Database

The screenshot shows the Neo4j Desktop interface. On the left, the 'Database information' panel displays the Northwind database schema. It lists nodes (953) including Category, Employee, Order, Product, Shipper, and Supplier. Relationships (3,147) include CONTAINS, PART_OF, REPORTS_TO, SOLD, and SUPPLIES. Property keys are listed for various nodes. An orange arrow points from the 'Product' node in the schema to the first result in the query output. The main panel shows a Cypher query: `MATCH (n:Product) RETURN n LIMIT 25;`. The results are displayed in a table view, showing the first three products: 'Queso Cabrales' (ID: 11, Price: 21.0), 'Queso Manchego La Pastora' (ID: 12, Price: 38.0), and 'Konbu' (ID: 13, Price: 6.0).

Database information

Nodes (953)

- Category
- Employee
- Order
- Product
- Shipper
- Supplier

Relationships (3,147)

- CONTAINS
- PART_OF
- REPORTS_TO
- SOLD
- SUPPLIES

Property keys

- categoryID, categoryName, companyName
- data, description, discount, employeeID
- firstName, id, lastName, name, nodes
- orderDate, orderID, phone, productID
- productName, quantity, relationships
- requiredDate

Show all (7 more)

Neo4j Desktop

Instance01 / neo4j

Send feedback

Query

neo4j

neo4j \$ MATCH (n:Product) RETURN n LIMIT 25;

Graph Table RAW

n

{:Product
 { unitPrice: 21.0,
 productID: "11",
 productName: "Queso Cabrales" }
}

{:Product
 { unitPrice: 38.0,
 productID: "12",
 productName: "Queso Manchego La Pastora" }
}

{:Product
 { unitPrice: 6.0,
 productID: "13",
 productName: "Konbu" }
}

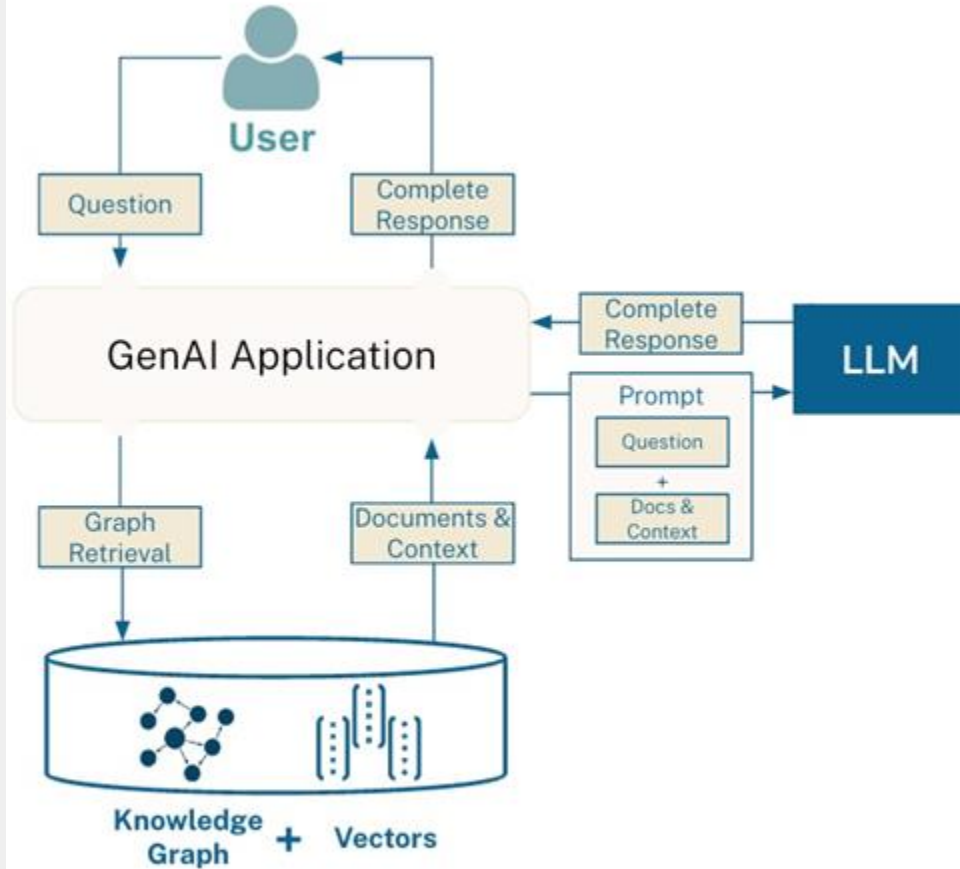
Started streaming 25 records after 18 ms and completed after 19 ms.

```
MATCH (p:Product {productName:
'Queso Cabrales'})
RETURN p.productID AS id,
p.unitPrice AS price;
```

The ID of the product Queso Cabrales is '11' and the price is 21.0.

GraphRAG

The GraphRAG integrates knowledge graphs into Retrieval-Augmented Generation (RAG) systems to enhance the accuracy, context, and explainability of GenAI results beyond what traditional vector-based RAG alone can achieve.



Demo

GraphRAG

- [Manifesto](#)
- [Neo4j Workspace](#)
- [Neo4j FullIndex](#)
- [Neo4j VectorIndex](#)
- [NorthWind](#)





ANSIBLE PILOT

Ansible Pilot Community

Keep Calm and Ansible On

```
host: all
become: true
vars:
  share: "/nfs/share"
  options: "192.168.0.0/24(rw, sync, root_squash)"
  permission: "0777"
tasks:
  - name: NFS server installed
    ansible.builtin.yum:
      name:
        - nfs-utils
        - nfs4-acl-tools
      state: present

  - name: share directory
    ansible.builtin.file:
      path: "{{ share }}"
      state: directory
      mode: "{{ permission }}"
      owner: root
      group: root

  - name: share in /etc/exports
    ansible.builtin.lineinfile:
      path: /etc/exports
      line: "{{ share }}"
      state: present
      notify: restart NFS

  - name: export share
    ansible.builtin.exportfs:
      name: share
      state: enabled

  - name: firewall enabled
    ansible.posix.firewalld:
      services: "{{ item }}"
      state: enabled
      permanent: true
      immediate: true
      with_items:
        - nfs
        - rpc-bind
        - mountd

  - name: restart NFS service
    ansible.builtin.service:
      name: nfs-server
      state: restarted
      enabled: true

PLAY [nfs service demo] *****

TASK [Gathering Facts] *****
ok: [demo.example.com]

[... output truncated ...]

PLAY RECAP *****
demo.example.com : ok=7 changed=6 unreachable=0
```

Topics

```
Verifying | Success: 1.40-4.el9.x86_64
Installed products updated.

Installed:
ansible-core-2.12.2-1.el9.x86_64
git-2.31.1-2.el9.2.x86_64
git-core-doc-2.31.1-2.el9.2.noarch
perl-Git-2.31.1-2.el9.2.noarch
python3-helm-2.9.1-2.el9.noarch
python3-cryptography-3.4.7-4.el9.x86_64
python3-montyrsa-1.1.1-12.el9.x86_64
python3-ply-3.11.13.el9.noarch
python3-py2-2021.1-4.el9.noarch
vim-plug-1.80-4.el9.x86_64

Complete!
[root@centos-stream ~]# ansible --version
ansible [core 2.12.2]
  config file = /etc/ansible/ansible.cfg
  configured module search path = ["/root/.ansible/plugins/modules", "/usr/share/ansible/plugins/modules"]
  ansible python module location = /usr/lib/python3.9/site-packages/ansible
  ansible collection location = /root/.ansible/collections:/usr/share/ansible/collections
  executable location = /bin/ansible
  python version = 3.9.8 (main, Nov 8 2021, 00:00:00) [x86_64-linux]
  (jinja version = 2.11.3)
  libyaml = True
```

Installation Playbook

Linux Red Hat Debian Windows VMWare Kubernetes Ansible Automation Platform

```
PLAY [this service demo]
TASK [Gathering Facts]
ok: [demo.example.com]

TASK [NFS server installed]
changed: [demo.example.com]

TASK [share directory exists]
changed: [demo.example.com]

TASK [share in /etc/exports file]
changed: [demo.example.com]

TASK [export share]
changed: [demo.example.com]

TASK [Firewall enabled]
changed: [demo.example.com] => (timoutfs)
changed: [demo.example.com] => (timoutpc-404d)
changed: [demo.example.com] => (timoutmount)

RUNNING HANDLER [restart NFS server]
changed: [demo.example.com]

play recap
```

```
#### task 'is not a valid attribute for a play'

The error appears to be in '/Users/bertav/gr/github/ansible-pilot/troubleshooting/invalid_play_attribute_error.yml': line 2, column 3, but may
be elsewhere in the file depending on the exact syntax problem.

The offending line appears to be:

---
- name: File module demo
  # here
  ansible-pilot $ ansible-playbook -i virtualmachines/demo/inventory troubleshooting/invalid_play_attribute_f
ix.yml

PLAY [File module demo]
TASK [Gathering Facts]
ok: [demo.example.com]

TASK [Creating an empty file]
changed: [demo.example.com]

PLAY RECAP
demo.example.com : ok=2 changed=1 failed=0 skipped=0 rescued=0 ig
nored=0
```

Troubleshooting

Feedback



Mahaboob Alam • 3 months ago

Thanks, Ansible Pilot. After running several videos nothing really could direct to the right solution. your solution is worked amazingly!!! keep posting new solutions.



@marcoctavo2155 • 1 day ago

Thanks a lot, I had the problem today

REPLY

1 reply



Ansible troubleshooting –
ERROR: No module named
'markupsafe'



@AnsiblePilot • 1 second ago

Glad it helped. I had the same problem a few days ago. Sharing is caring!



avishay hakim • 2



Luiz Fernan

Thanks a lo

Thank you - this video saved me hours of troubleshooting :)

i just want to say thanks

I just subscribed you, yesterday,
And you are here with big ears 🐻
marry christmas 🎅
love from india...



Manoj Tomar • 2 months ago

you are best i have staked by this problem since two weeks now your video worked p
thanks!



Emil Colina • 13 days ago

You save my study, thank soo much, when i'll back soon 🙏



Ravi Raj Kumawat • 12 days ago

Thanks



@Fields10x • 2 weeks ago
Awesome!!! Solved the error.



Hayder Alobaidi • 2 months



Synth C • 3 weeks ago

I like the error, because i to lean so much, Great video thank u so much!

ze how cool is your explanation. I have subscribed the channel. Thanks a lot



Sadham H

REPLY

0 replies



@davidodev • 9 days ago
thank you buddy!

REPLY

0 replies



Integrate Private Automation
Hub with Automation
Controller

laybook from a windows

Great videos from your channel.Quick question:So you created a playbox
terminal?



Raghu Veer • 1 month ago

Nice explanation , i am expecting more videos related to Ansible , please do one video on Basic Ansible play book



avishay hakim • 2 weeks ago

Thank you - this video saved me hours of troubleshooting :)



Rushikesh gawali • 2 months ago



Ansible troubleshooting –
ERROR: No module named
'markupsafe'

seen 👍



Synth C • 1 month ago

its so great! gold! thank u so much!!



@davidburic538 • 2 days ago

cheers man, saved my day

REPLY

0 replies



ayyed • 2 months ago

help me to tackle my problem thank a lot .





ansiblepilot.com



25,7K
views/month

715 videos

~70 hours

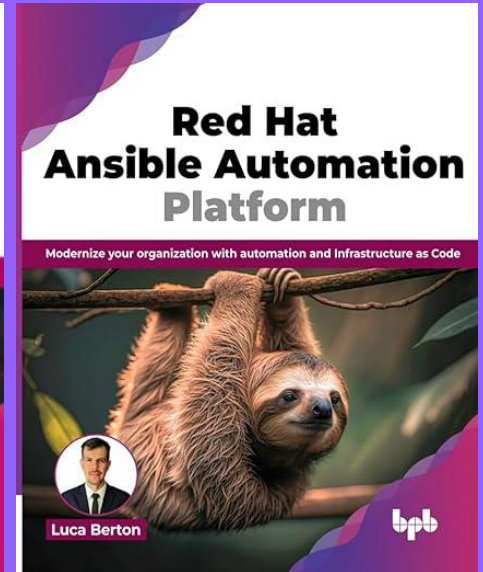
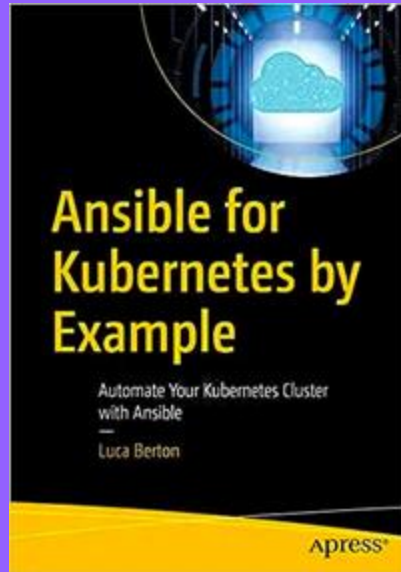
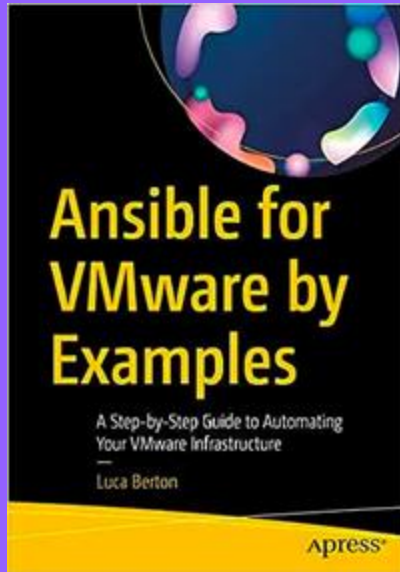
40K+
views/month

US IN GB

5K LOC

YAML, Bash, Markdown,
HTML, PowerShell, Ruby

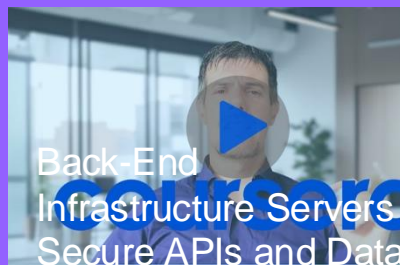
Published Books



Partnership



Video Courses



Learn Ansible Automation in 300+ examples & practical lessons

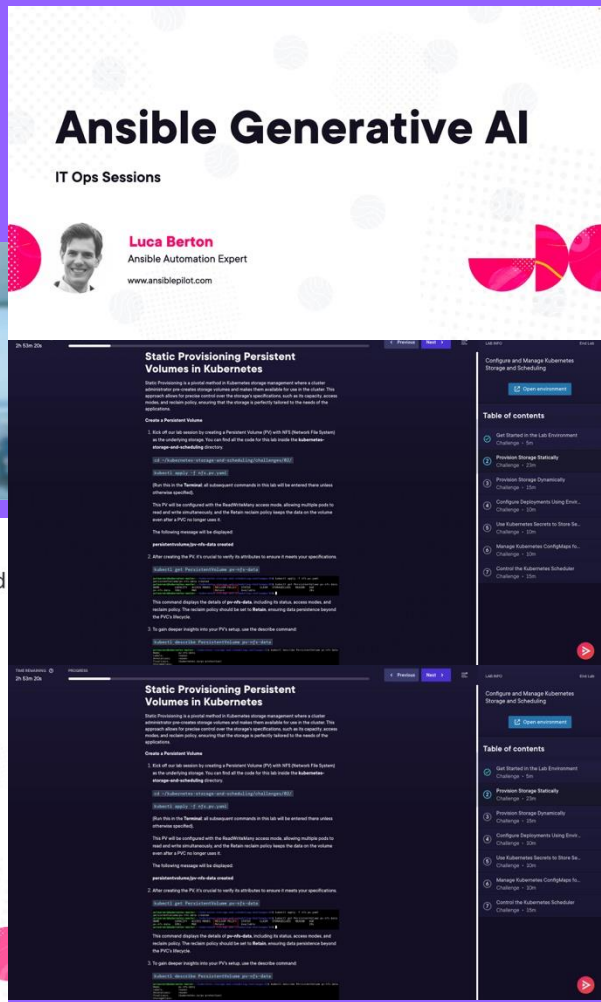
Learn **Ansible** with some real-life examples of how to use the most common modules and **Ansible** Playbook

Luca Berton

5.0 ★★★★★ (509)

48 total hours · 310 lectures · Intermediate





Thank you

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<https://www.ansiblepilot.com>

go!