



The bridge to possible



Drag, Drop, and Deploy Low-Code AI Agents for Network Ops

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Developer Advocate



```
!
username Alfonso-(Poncho)-Sandoval
!
role developer title "Developer Avocado" 🥑
organization "Cisco Systems Portugal" PT
!
interface LinkedIn0/0
ip address linkedin.com/in/asandovalros
no shutdown
!
interface GitHub0/1
ip address github.com/ponchotitlan
no shutdown
!
end
!
```



Cisco Office in Tokyo, Japan JP

Agenda

AgenticOps in the World of Networking

An AgenticOps Open Ecosystem, brick-by-brick

Demo 1: Agentic ChatOps for NetAuto

Demo 2: Agentic Reporting & Ticketing for NetAuto

Wrap-up

AgenticOps in the World of Networking



Speaking CLI

Modern LLMs already understand network CLI semantics for multiple vendors and platforms



Reasoning about intent

“Check BGP health” or “Investigate QOS compliance” implies reasoning that LLMs can do



Low-code tools available

Modern low-code tooling available for agentic workflows (“low-code” still implies SOME code ...)

An AgenticOps Open Ecosystem, brick-by-brick



Ollama (Local LLM runtime)

- Open-source runtime for running models locally
- Several models supported (Llama, Qwen, Mistral, etc)
- Enables self-hosted AI



n8n (Low-code orchestration)

- Open-core workflow automation
- Enables auditable, guardrailed workflows
- Self-hostable and community-driven



MCP server (based on pyATS framework)

- Based on pyATS, an Apache 2.0-licensed open-source framework maintained by Cisco.
- Enforces safe R/W ops on real infrastructure through several tools

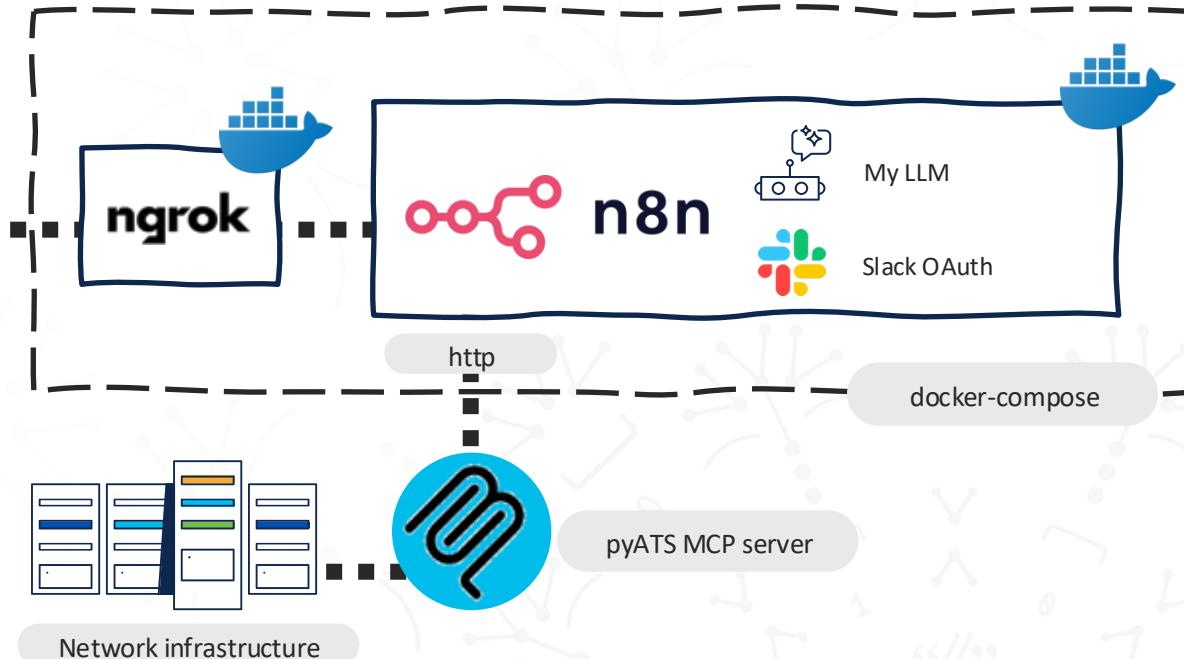
Demo 1: Agentic ChatOps for NetAuto



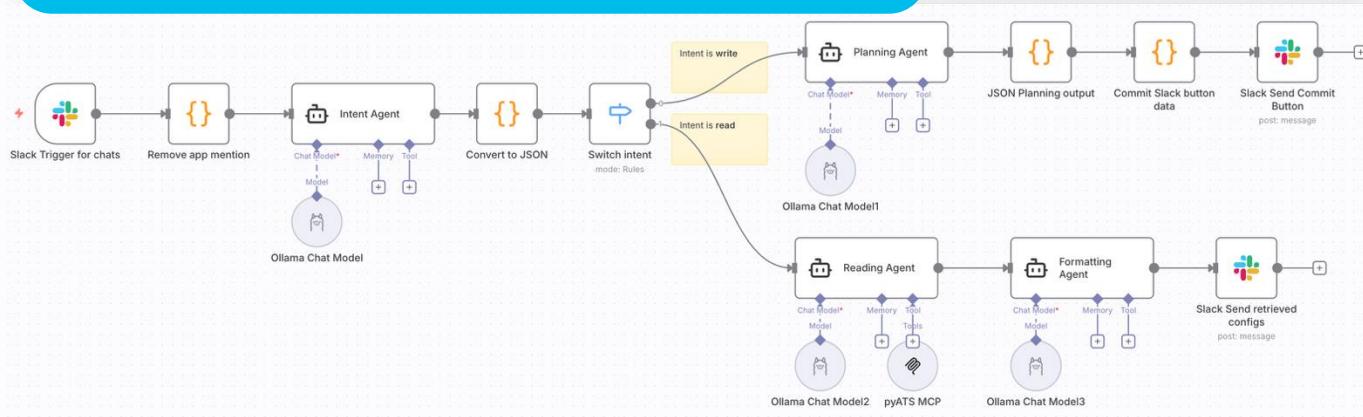
webhooks

Read queries

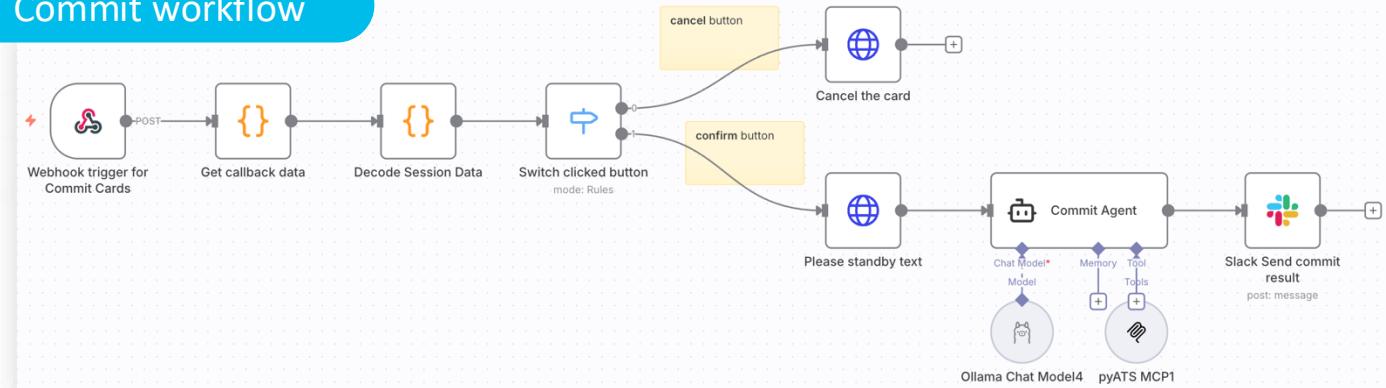
Commit queries with Slack cards for human-in-the-loop



Reading + Commit intent (planning) workflow



Commit workflow



Reading interaction

The screenshot shows a Slack channel named '# net-hot-gossip'. A message from user 'Poncho Sandoval' at 7:33 AM asks for a table with VLAN details for device SW1. Below the message is a table showing VLAN configuration:

VLAN Name	Status	Ports
1 default	active	
10 VLAN0010	active	Ethernet0/0, Ethernet0/2
20 VLAN0020	active	Ethernet0/1

Below the table, a note states: "The output shows the current VLAN configuration on SW1, including VLAN ID, name, status, and ports associated with each VLAN. Note that some VLANs like fddi-default, token-ring-default, etc., are not user-configurable by default."

At the bottom, there is a message input field with placeholder text "Message #net-hot-gossip" and a toolbar with various message formatting options.

Commit interaction

The screenshot shows the same Slack channel '# net-hot-gossip'. A message from user 'Poncho Sandoval' at 7:38 AM asks for a new primary VLAN on SW1 named MGMT attached to port Ethernet0/1.

Below the message, a configuration plan titled "Configuration Plan for SW1" is displayed:

Create primary VLAN 1 named MGMT and assign it to Ethernet0/1 interface

Risk Level: MEDIUM

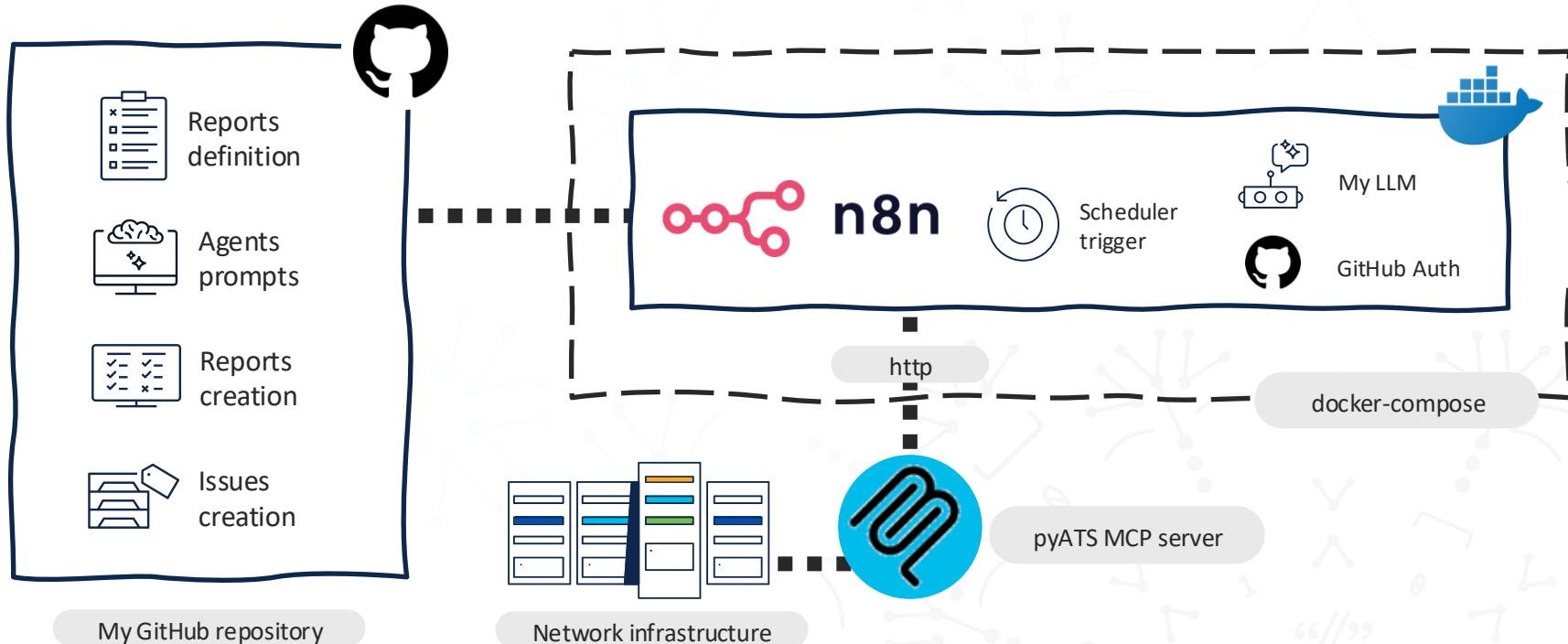
Commands to execute:

```
configure terminal
vlan database
vlan 1 name MGMT
exit
interface Ethernet0/1
switchport mode access
switchport access vlan 1
end
```

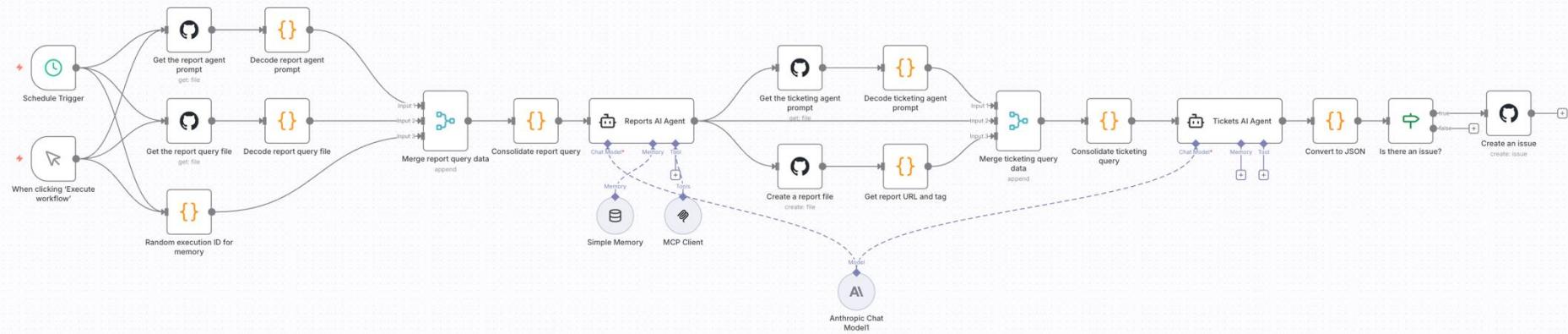
At the bottom, there are two buttons: "Confirm & Apply" (green checkmark) and "Cancel".

At the very bottom, there is a message input field with placeholder text "Message #net-hot-gossip" and a toolbar with various message formatting options.

Demo 2: Agentic Reporting & Ticketing for NetAuto



Reporting & ticketing workflow



 ponchotitlan interfaces_status report gen

Preview | Code | Blame 95 lines (70 loc) · 4.28 KB

Report generation

Network Interface Status Summary Report

Executive Summary

Analysis of interface operational states across the network infrastructure reveals **14 operational interfaces** and **4 administratively down interfaces** across 4 devices. The network demonstrates healthy connectivity with active traffic on management interfaces and no packet drops or queue congestion detected.

Scope & Assumptions

- **Scope:** Complete interface status analysis for all devices (R1 , R2 , SW1 , SW2)
- **Data Source:** Real-time interface status via `show ip interface brief` and `show interfaces summary`
- **Assessment Period:** Current operational state snapshot

Environment Overview

Infrastructure Components:

- **Routers:** 2 IOS-XE devices (R1 , R2)
- **Switches:** 2 IOS-XE devices (SW1 , SW2)
- **Total Interfaces:** 18 interfaces analyzed
- **Platform:** IOL (IOS on Linux) virtual environment

[interfaces_status report gen] [⚠️medium] Address interface redundancy and documentation gaps on Router R1 #17

[Edit](#)[New issue](#)[Open](#)

ponchotitlan opened last week

Owner

...

Issue creation

Context

Router R1 interface analysis reveals healthy operations with 3/4 interfaces functional and zero errors. However, several operational improvements are needed to enhance network reliability and maintainability.

Key Issues Identified

- Single Point of Failure: Ethernet0/3 remains unused, reducing redundancy options
- Documentation Gap: Missing interface descriptions on Ethernet0/0 and Ethernet0/1
- Traffic Concentration: All traffic flowing through only 3 active interfaces
- Monitoring Gap: Lack of standardized interface monitoring

Action Items

Immediate Actions

- Add descriptions to Ethernet0/0 and Ethernet0/1 for operational clarity
- Evaluate Ethernet0/3 - determine if it should be activated for redundancy or permanently removed

Assignees

No one - [Assign yourself](#)

Labels

No labels



Projects

No projects



Milestone

No milestone



Relationships

None yet



Development

Code with agent mode



[Create a branch](#) for this issue or link a pull request.

Operational Improvements

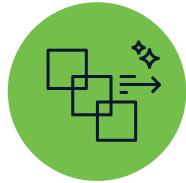
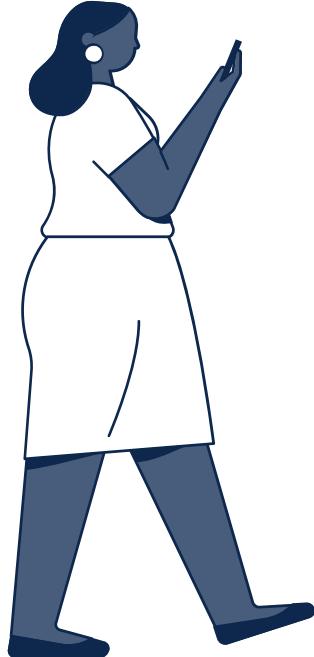
- Implement regular interface health checks focusing on error counters and utilization trends
- Establish consistent interface naming and description conventions

Notifications

[Customize](#)

Unsubscribe

You're receiving notifications because you're subscribed to this thread.



Start small: build single-purpose agents for well-defined operational tasks



Treat LLM agents like junior network engineers: restrict what they can touch and how



Build agents on top of real network tools (CLI, APIs, pyATS) – Also, low-code is your ally!



About n8n
docs.n8n.io/

About pyATS
developer.cisco.com/docs/pyats/

Our demo repo: pyATS loves AgenticOps
cs.co/pyATS-loves-agenticops



FOSDEM



The bridge to possible