

Hunting Configuration Drift: How WEC Uses Nautobot to Automate Network Compliance

*Building a trusted Source of Truth to standardize
configurations, detect drift, and improve network operations*

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Why Automate & Why Now



**Resource constraints limited
manual validation and
documentation**



**Network documentation
needed to be more accurate
and current**



**Configuration standards
needed consistent
deployment & validation**



**Drift needed to be
detected continuously,
not periodically**

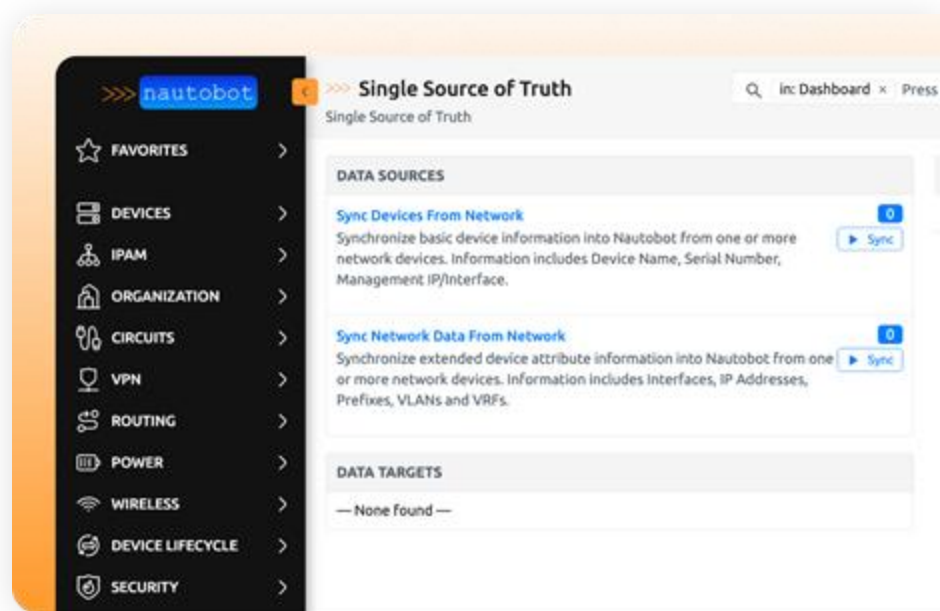
From Inventory to Intent

WEC is building a trusted automation foundation for network operations.

Nautobot provides the Source of Truth and intended-state model.

THE GOAL

Standardized configurations, drift detection, and compliance.



What WEC Set Out to Achieve



Create a validated
inventory of all network
devices



Synchronize data
across systems of
record



Establish an intended-
state model of the
network



Detect configuration drift
before it creates
operational risk



Build a platform for future
automation initiatives

WEC's Automation Journey

1

Discover & onboard
network devices

3

Synchronize & enrich
data with SSoT

5

Define intended state
for the network

2

Build a validated
inventory in Nautobot

4

Use automation to detect
and remediate drift

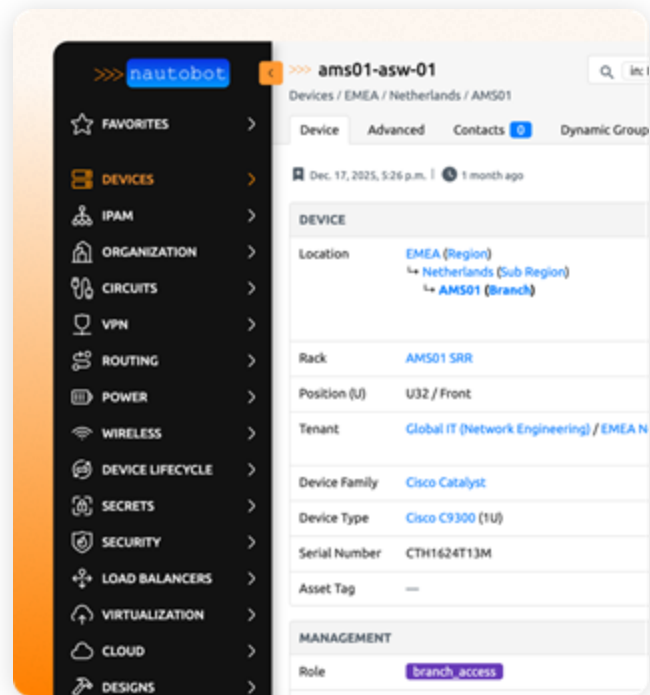
Why Source of Truth is Important for Automation

- Automation is only as accurate as the data behind it
- Nautobot provides one trusted place for inventory and configuration data
- Data can be validated, normalized, and enriched before automation uses it
 - Good data makes good automation
- Connect multiple Systems of Record for a unified inventory view
- Intended state gives operations a reference model to validate against



Why WEC Selected Nautobot

- Evaluated Netbox, IP Fabric, Ansible Automation Platform, Terraform
- Need something to tie all the pieces together; not just documentation or execution, but integration
- Nautobot could tie together inventory, systems of record, and automation workflows
- Nautobot's extensibility supports current and future use cases
- Cost and operational fit were important decision factors
- Ansible/Terraform - Don't have built-in documentation



Laying the Foundation/Building an SoT



Onboarded devices into
Nautobot to create a valid
inventory



Deployed the SSoT app to
synchronize data



Enriched and validated
data across systems



Nautobot as the source of
intended -state model of
the network



Established
Nautobot as the reference
point for operations

Connecting System of Record

- Existing systems of record remain important sources of data
- SSoT synchronizes data between those systems and Nautobot
- DiffSync helps compare, validate, and reconcile data
- Nautobot creates a unified operational view
- Better data enables better automation decisions



What this Enables for WEC



More accurate network
inventory



Cleaner data across
systems



Better alignment between
documented and actual
network state



A repeatable reference
model for standards and
compliance

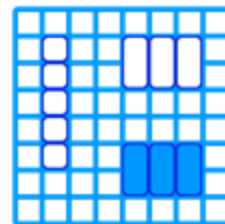


A scalable foundation
for future automation

Future Automation Use Cases & their Value to WEC



Golden Config work has started & will
continue to expand



Radio planning & site surveys

Next Phase: Golden Configuration

- Refine approved configuration standards in Nautobot
- Compare actual device configurations against intended state
- Identify devices that have drifted from compliance
- Generate compliance reporting for operations and governance
- Remediate drift to keep devices aligned with standards



Next Phase: Radio Planning



Model radio
communication network
assets in Nautobot



Capture and standardize
site survey data



Improve visibility across
distributed
communications
infrastructure



Use trusted data to
support future radio
network workflows



Apply the same Source of
Truth principles to new
domains

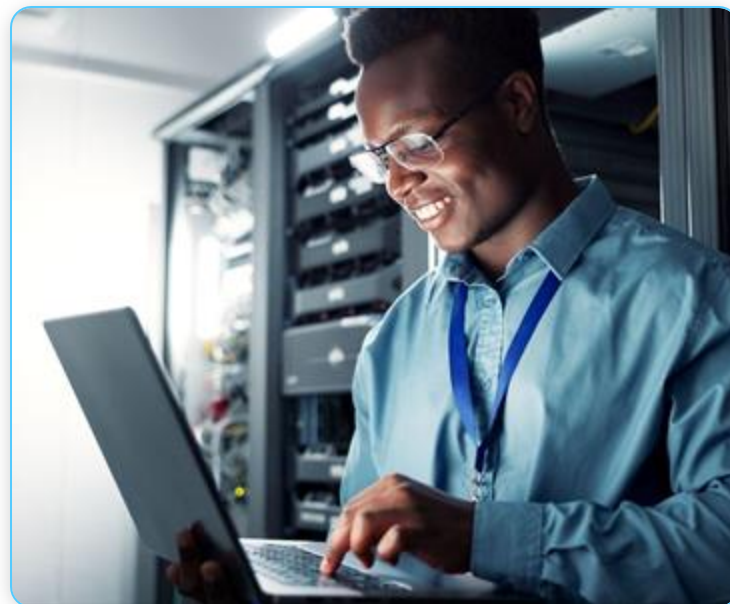
Lessons for Network Automation Leaders

- Start with inventory and data quality
- Connect systems of record instead of replacing everything at once
- Define intended state before enforcing compliance
- Validate continuously to prevent drift
- Build a foundation that can expand over time



Closing / Q&A

- Your network cannot automate what it cannot trust
- WEC built a foundation of validated data and intended state
- Nautobot enables standardized operations, drift detection, and compliance
- The next chapter is continuous compliance and broader operational automation
- Questions?



Thank you!