

Developer Days  
Automation



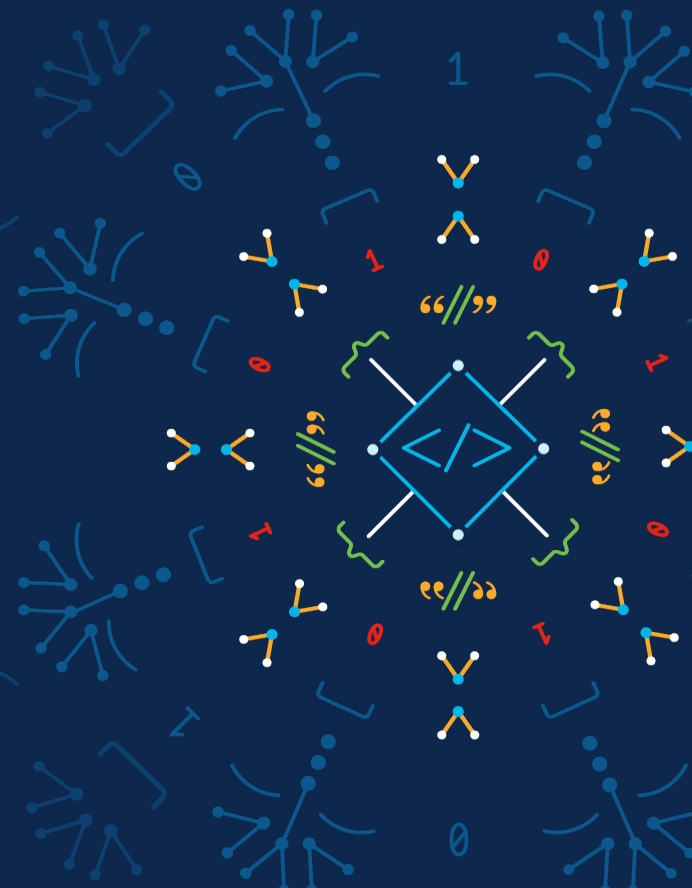
The bridge to possible

# Cloud-Native Network Function Orchestrator

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One Penn Plaza, NY

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Jesse Wayne, Product Manager





Who are we?

# Jesse Wayne

## Product Manager

I want to build things that  
make people's lives easier

I want to lower the learning  
curve for NSO

I have a very beautiful dog

Wow.



**Nirali Vasoya**  
Technical Leader

I never say no to a Dessert

I want to make NSO adoption  
easier for customers

I enjoy building things

# Summer Project



Why did we build CNFO?

# The network function landscape is changing



Physical Devices

Physical Network Functions  
(PNFs)



Virtual Machines

Virtual Network Functions  
(VNFs)

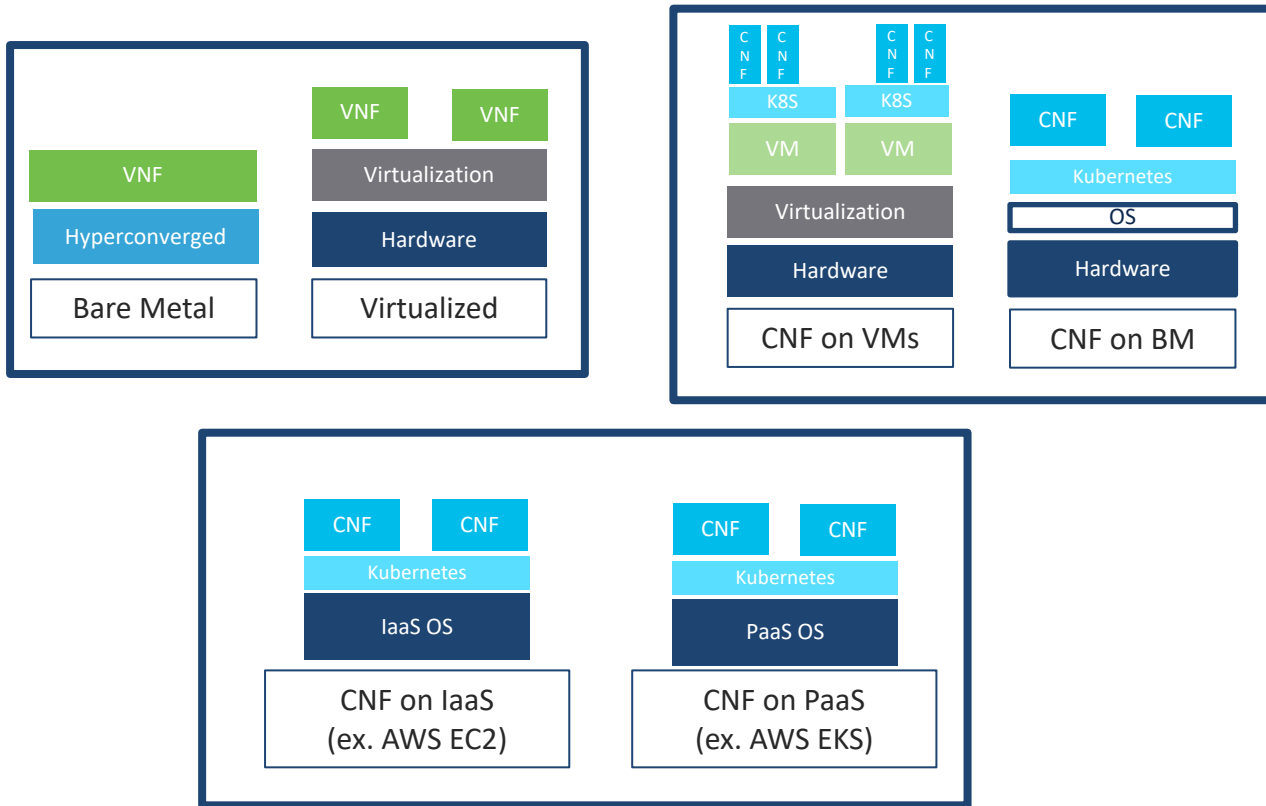


Containers

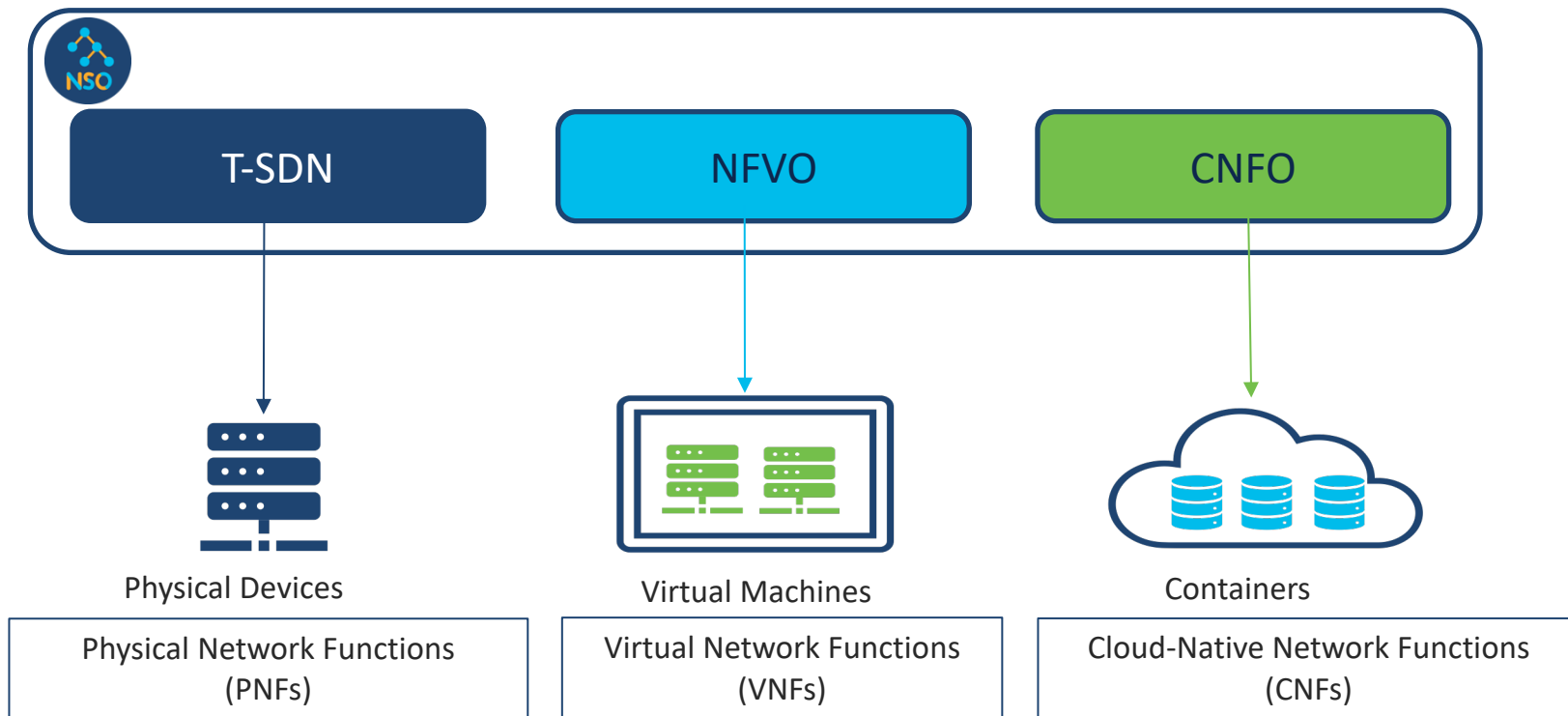
Cloud-Native Network Functions  
(CNFs)



# Deployment scenarios are diverse



# Orchestrate everything from one place



# NSO and CNFO Value Propositions

- End to End Orchestration
- Multi-Vendor Device Support
- Operational Consistency
- Orchestration at Scale



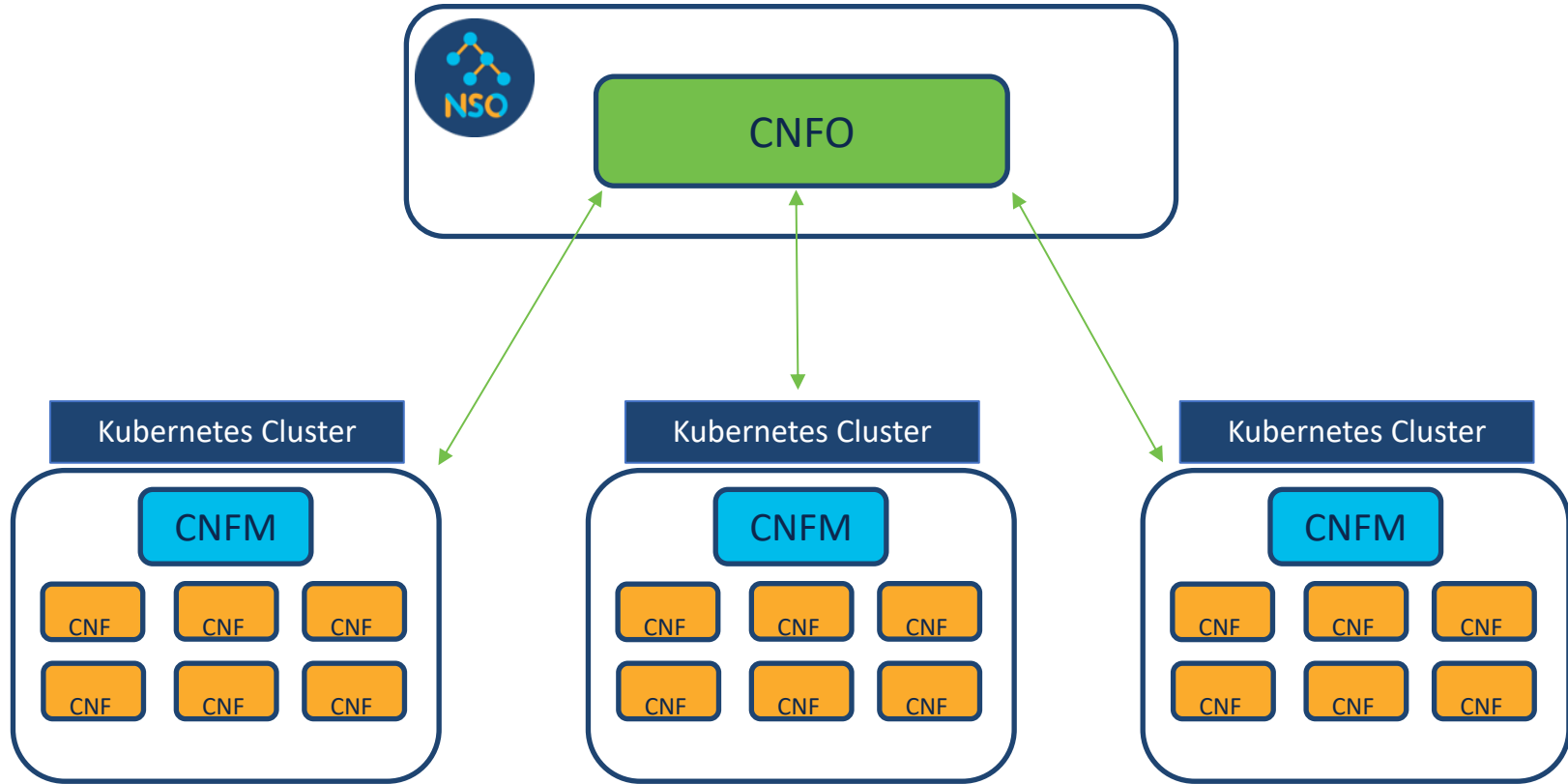
"...it took me half a day to get their environment loaded manually"

# What does this look like with 200 CNFs?

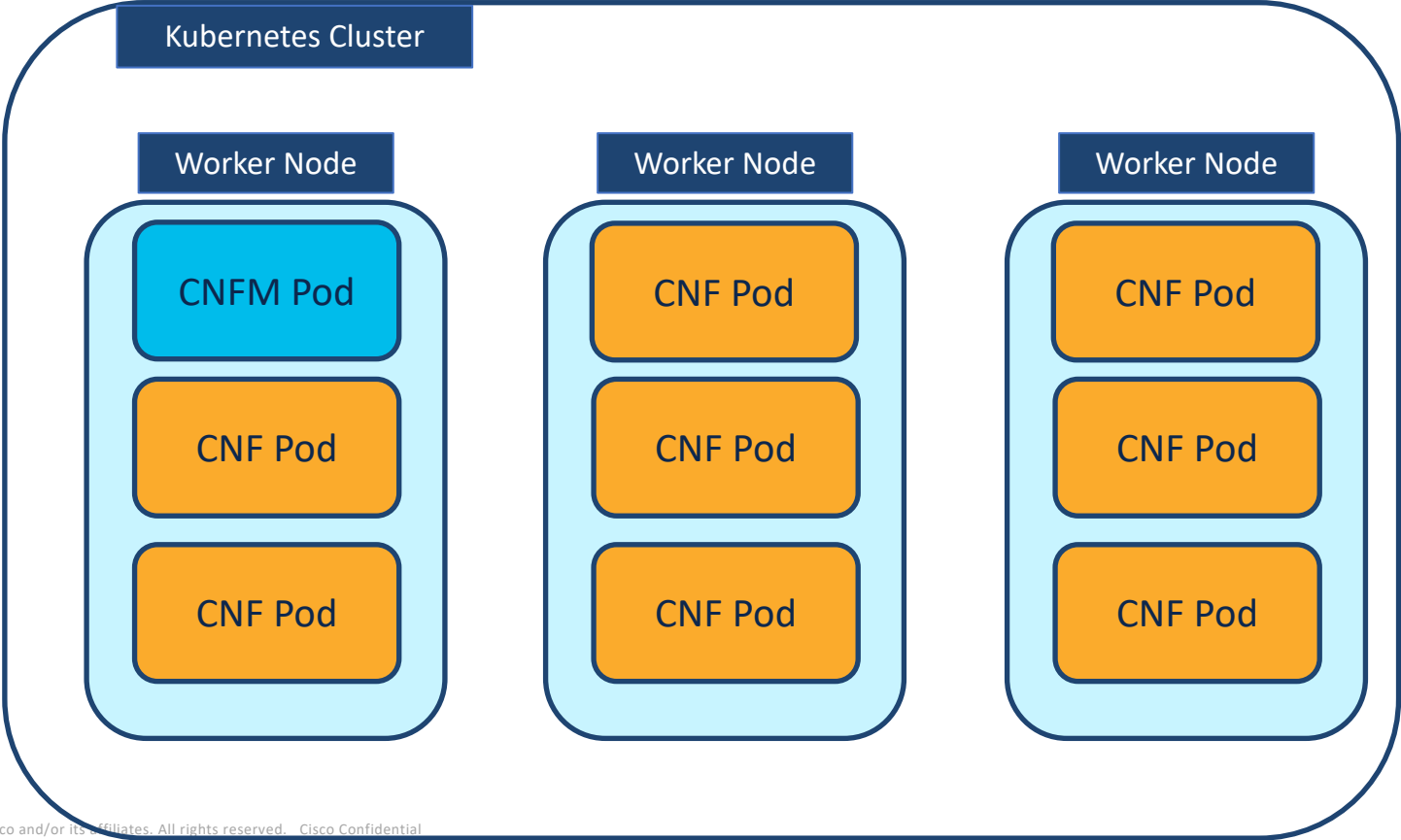


What is CNFO?

# CNFO Architecture

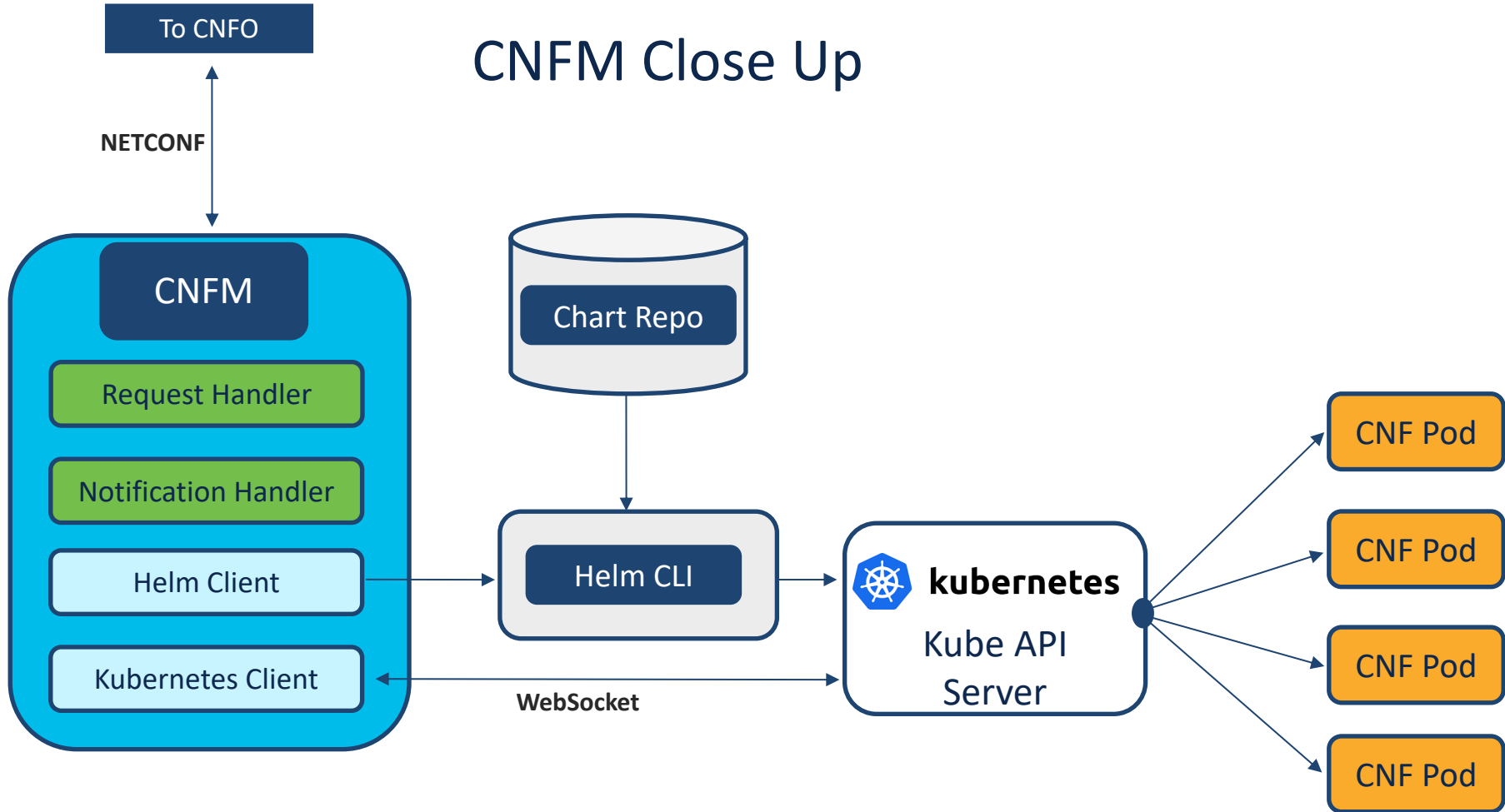


# Cluster Close Up

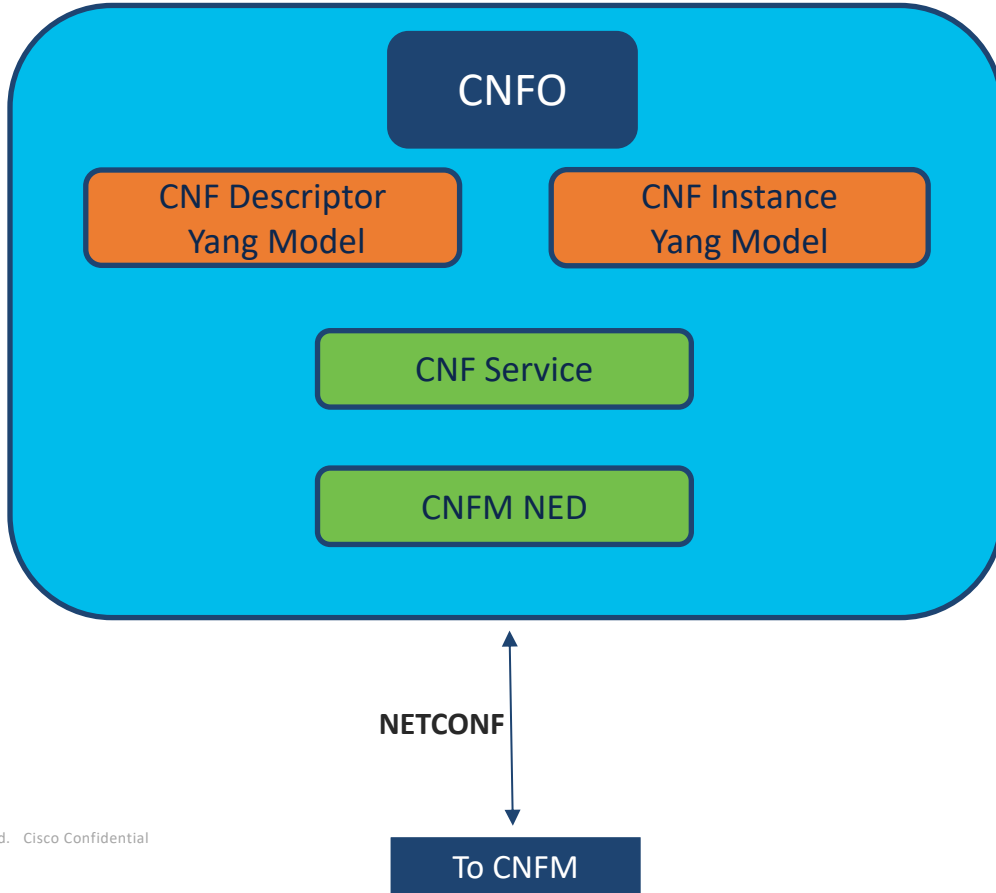




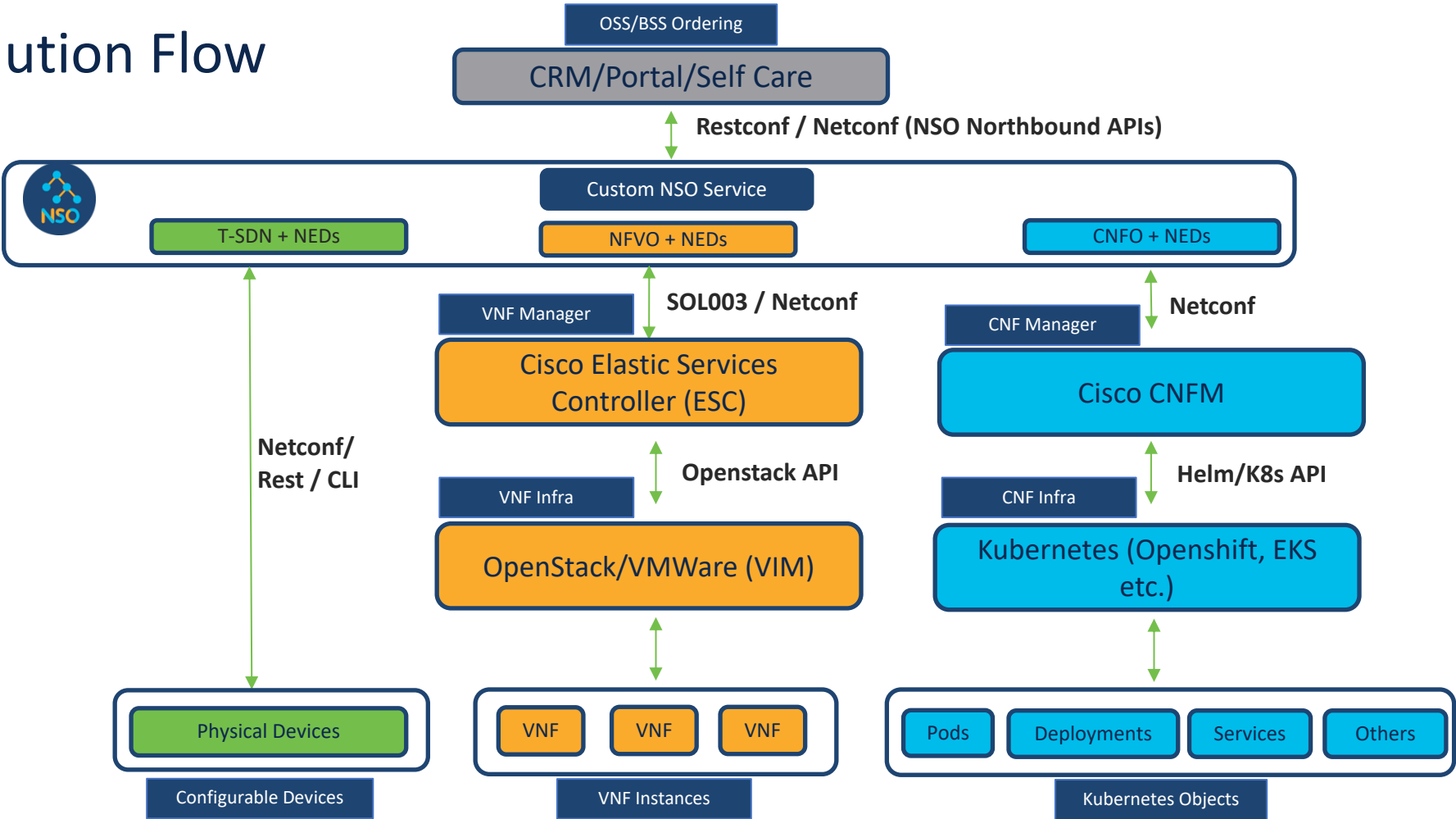
# CNFM Close Up



# CNFO Close Up



# Solution Flow



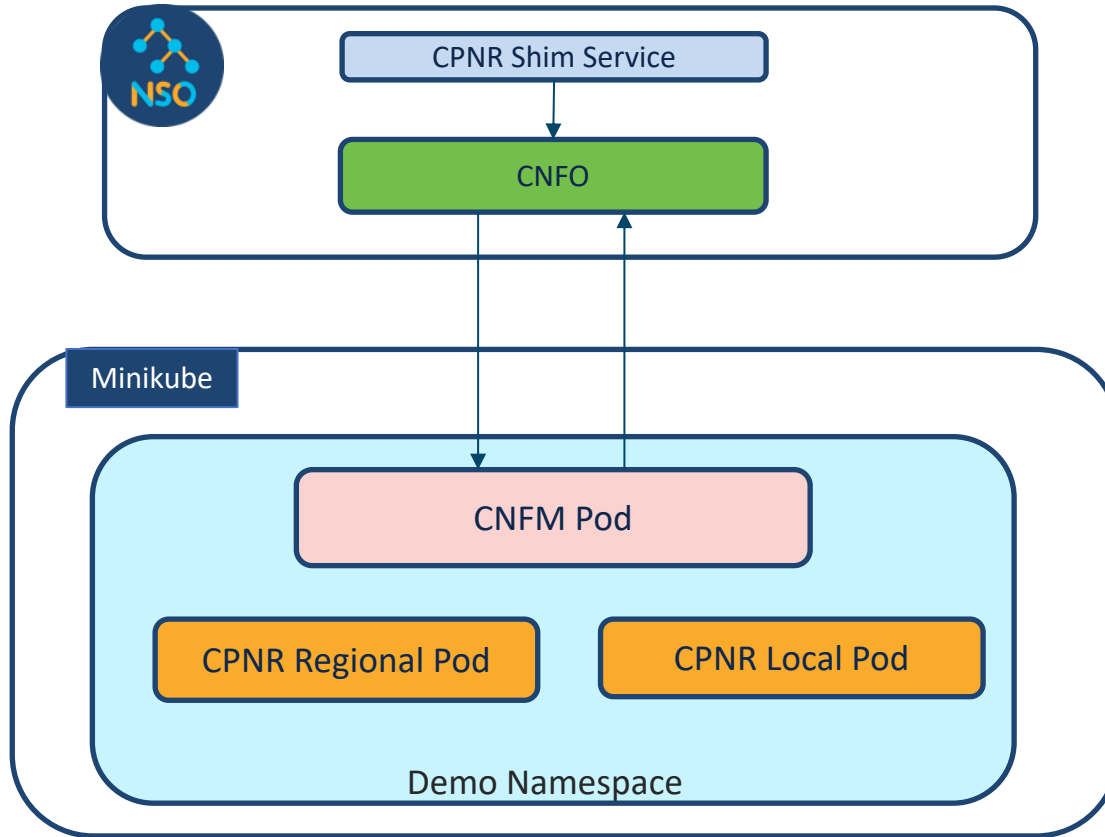
Demo



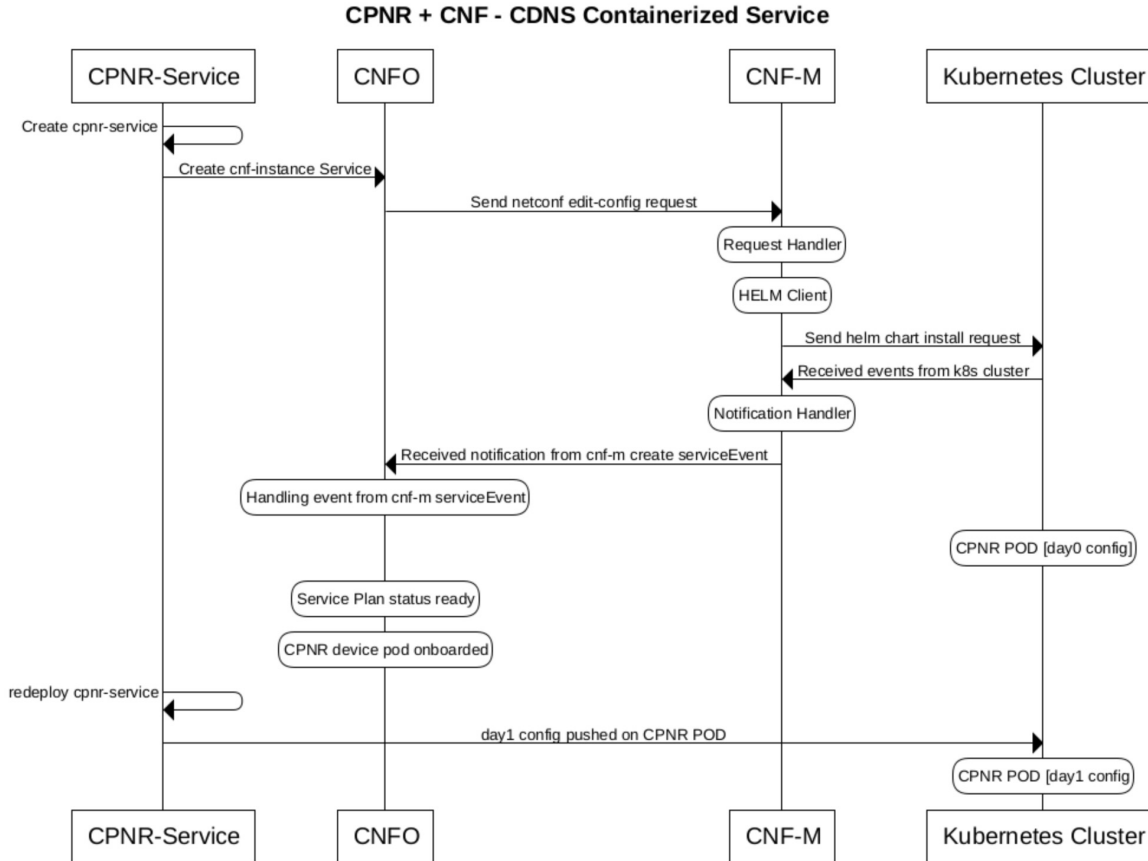
# CNF - Cisco Prime Network Registrar

- CPNR/CNR – DNS and DHCP services
- **Regional**
  - **Centralized manager** for config and operations along with product licensing
- **Local**
  - Provides a protocol service, like DNS Caching
- Typically, one regional and multiple local clusters

# CNFO Demo – CPNR



# CNFO Call Flow





The bridge to possible



Back Up Slides

# Helm: Package Management for Kubernetes

- Collection of all artifacts for your application lifecycle in K8s
- Adopted by most CNF vendors
- Deals with versioning, upgrades and other complex operations
- **Some definitions:**
  - **Chart:** A package of pre-configured Kubernetes resources.
  - **Release:** A specific instance of a chart which has been deployed to the cluster using Helm.
  - **Repository:** A group of published charts which can be made available to others