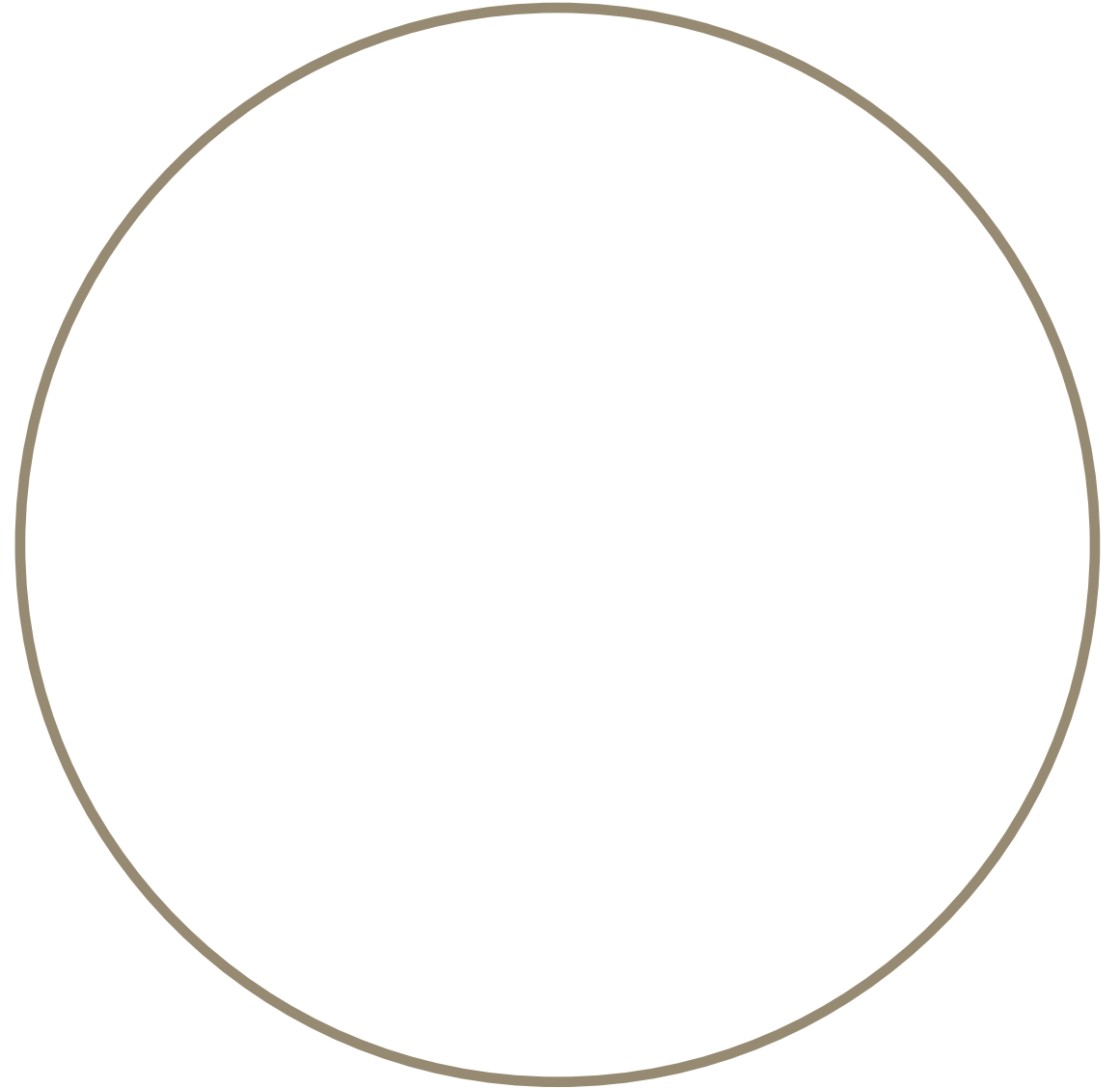


Let the AI build the Lab

Taran Deshpande

Technical Marketing Engineer

May 28, 2026



Agenda

Scene Setting

Ingredients

Demo

Adapting the Framework

Wrap Up

Scene Setting



Network Simulations

From full 'Digital Twin' to learning a new feature in the lab



Burden!

Knowledge: NOS-specific syntax, emulation environment, ...

Repetitive: A lot of configuration is boilerplate

Context Switch: Sometimes costly enough to find another approach



Can AI help?

Yes! Your assistant can take this on with off-the-shelf components.

Ingredients – My Picks



Platform

IOS XRd



Network Emulation

xr-compose



Agent (IDE) and LLM

Cursor and Claude



Prompting

Two *skills*: Lab Assistant and xr-compose tooling

This Framework is Transferrable

**IOS-XR + xr-
compose**

Current setup

**SR Linux +
Containerla
b**

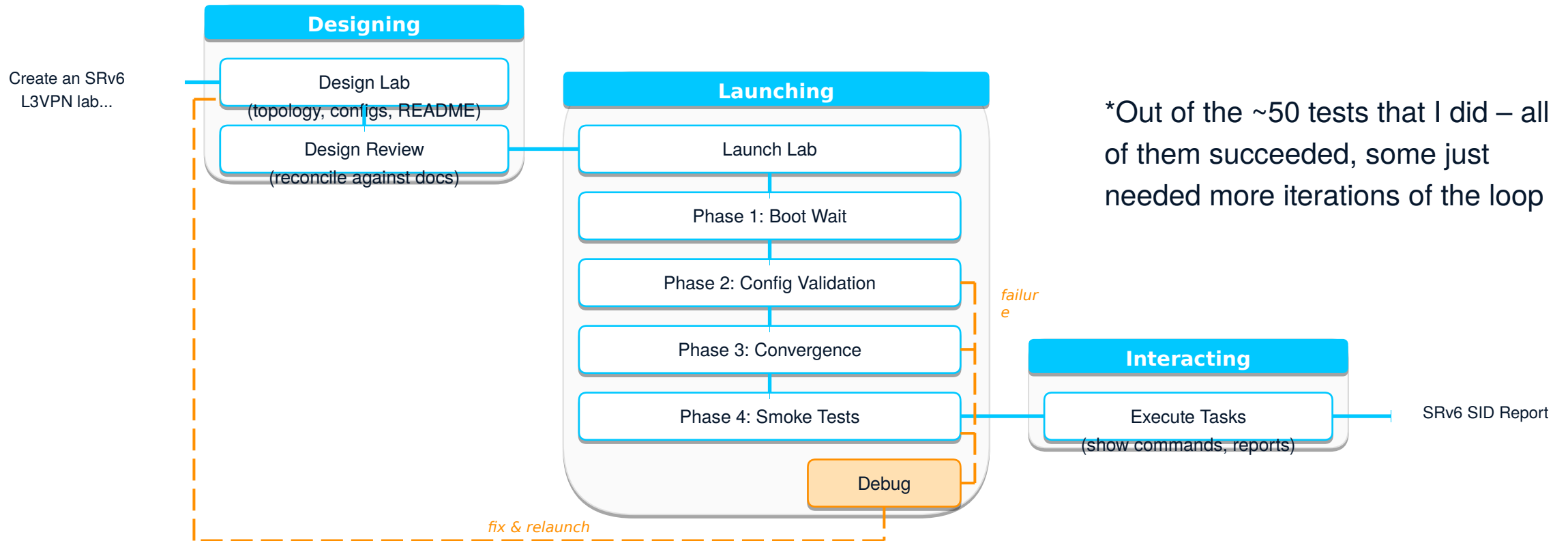
**Juniper
cRPD +
Containerla
b**

Alternative combinations

**Any NOS +
any lab tool**

Lab Assistant Skill: workflow

“Create a new lab which illustrates a simple SRv6 L3VPN. Using show commands taken from the lab create a markdown report which illustrates how SIDs work.”



Demo

Adapting the Framework

This Framework is Transferrable

About 90% of the lab-assistant skill carries over. Only the IOS-XR base config, show commands, and doc references need to change. The xr-compose-tool is XRd-specific and would get replaced per lab tool.

IOS-XR + xr-compose

IOS-XR configs and show commands

Cisco CCO and xrdocs for references

Runs on the xr-compose-tool skill

Current setup

SR Linux + Containerlab

Would use SR Linux configs and show commands

Would use learn.srlinux and Nokia documentation as references

Would run on a new containerlab-tool skill

Juniper cRPD + Containerlab

Would use Junos configs and show commands

Would use Juniper TechLibrary as reference documentation

Would reuse the containerlab-tool skill from the SR Linux port

Any NOS + any lab tool

Use whatever configs and show commands the NOS speaks

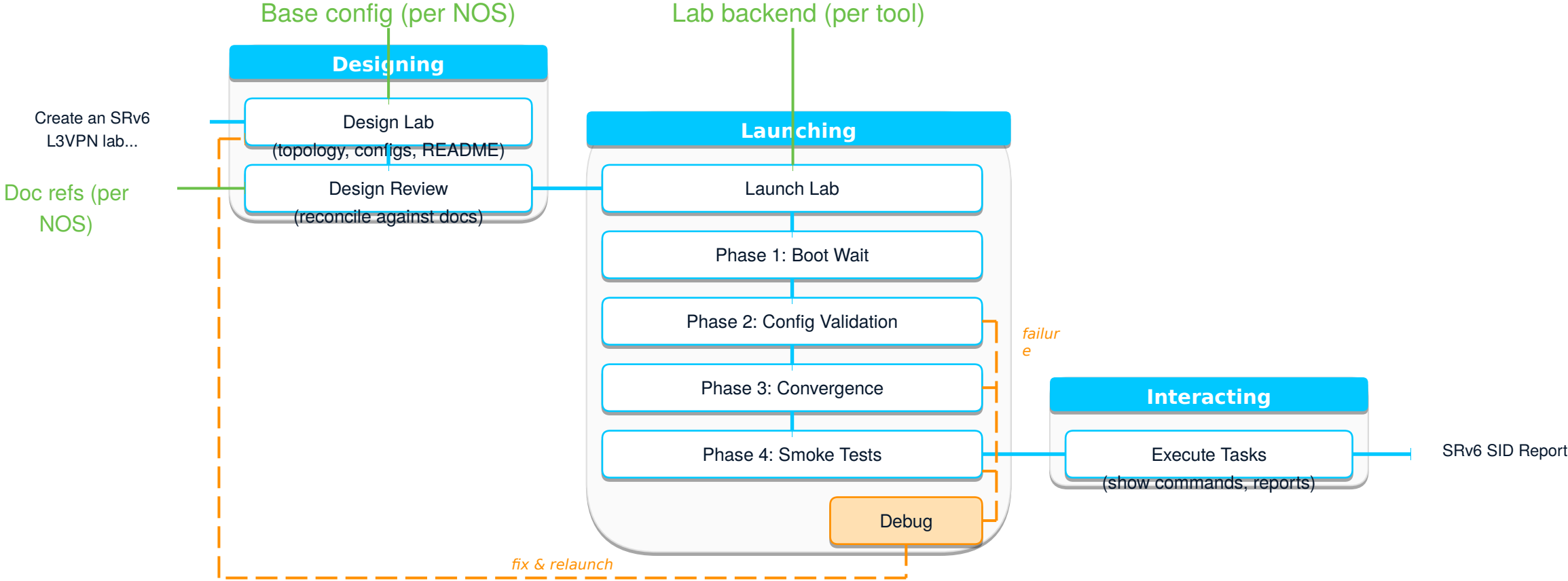
Pick authoritative reference sources for that NOS

Wrap the lab tool in a small backend skill

Alternative combinations

This Framework is Transferrable

“Create a new lab which illustrates a simple SRv6 L3VPN. Using show commands taken from the lab create a markdown report which illustrates how SIDs work.”



Wrap Up

Try It Out



XRd

CCO

<https://software.cisco.com/download>



**xr-
compos
e**

Github

<https://github.com/ios-xr/xrd-tools>



**Agent
+ LLM**

Bring your own



Skills

Github

<https://github.com/ios-xr/xrd-tools>



XRd Tools Github

XRd Devnet Sandbox

Already setup VM - Bring your own agent



<https://github.com/CiscoDevNet/XRd-Sandbox>

Thank You