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Inclusive, Accessible Tech: Bias-Free Language in Code and Configurations

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All are welcomed

The presentation today will touch on sensitive topics, including language that may be harmful to some audience members.

We will be sharing our efforts to remove this language from our products, content, and culture at Cisco.

If at any point you feel uncomfortable, please feel free to exit the session, and reach out directly with questions, or requests for more information in a format that works for you.

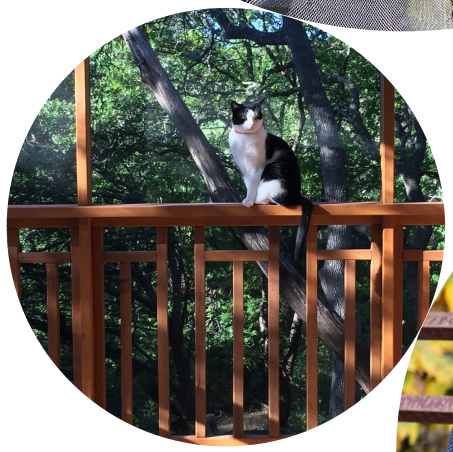
Hi!

I’m Anne Gentle, I lead Developer Experience at Cisco.

We make Cisco APIs better for developers.

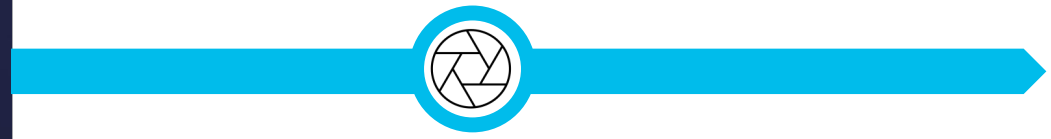
We treat docs like code for over 1000 code repositories for multiple products and platforms at Cisco.

I play tennis, kayak, hike, paddleboard, and work in Austin, Texas.



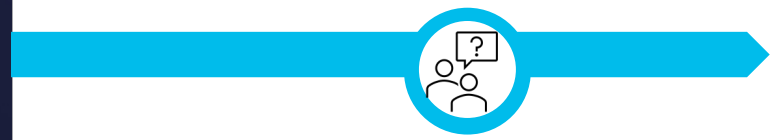
Overview

Social Justice Journey



Policy to Practice

Code and Config Examples



Resources and Questions

Power an Inclusive Future for All

We must help bridge gaps of inequity by using our technology, extended ecosystem, and the expertise of our teams, while creating more opportunities for more people, and acting responsibly to drive change.

– Cisco CEO Chuck Robbins

Cisco's Social Justice Actions

1. Influence Ecosystem
2. Increase Representation
3. Expand Pay Parity
4. Increase Board Diversity
5. Deliver Anti-Discrimination Legislation
6. Connect Leaders and Employees
7. Supplier Engagement
8. Commit to HBCUs
9. Support Black-Owned Companies
10. Diversify Partner Ecosystem
11. Invest in Innovation
12. **Human Rights in Technology Solutions**

Social Justice in Product Development

Human Rights by Design

Advise & Train Product Teams on Human Rights throughout the Product Development Lifecycle

Accessibility by Design

Advise & Train Product Teams on Accessibility throughout the Product Development Lifecycle

Inclusive Naming

- **Implement** Cisco's Inclusive Language Policy
- **Build** Employee Awareness about Inclusive Language
- **Drive** Compliance across Cisco's Functions
- **Engage** Community and share Best Practices
- **Embed** a Culture of Belonging via Governance Models

Inclusivity encompasses multiple aspects

- Gender neutrality including pronouns, non-binary typing
- Respectful language without drawing upon stereotypes
- People first, humans are humans not abilities or diagnoses
- Inclusive representation and avoiding idioms like "up in the air"
- Accessibility including screen reader experiences

Policy to Practice

Policies on Inclusive Language

Term	Recommended Replacements
master / slave	primary/secondary or primary/subordinate or control/data (for clustering)
whitelist / blacklist	permit (list)/block (list) or allow (list)/block (list)

Tier 2: Strongly Consider Replacing

Terms in this list should be replaced whenever possible, barring major breaking changes. Terms included in this list have one or all of the following:

- Are terms from Tier 3 that have undergone through external review by underrepresented minority groups and outside consultants
- Terms which would otherwise be in Tier 1 but have dependencies on language set by standards bodies, or are deeply embedded in low-level systems and thus difficult to change

Tier 3: Recommendations to Replace

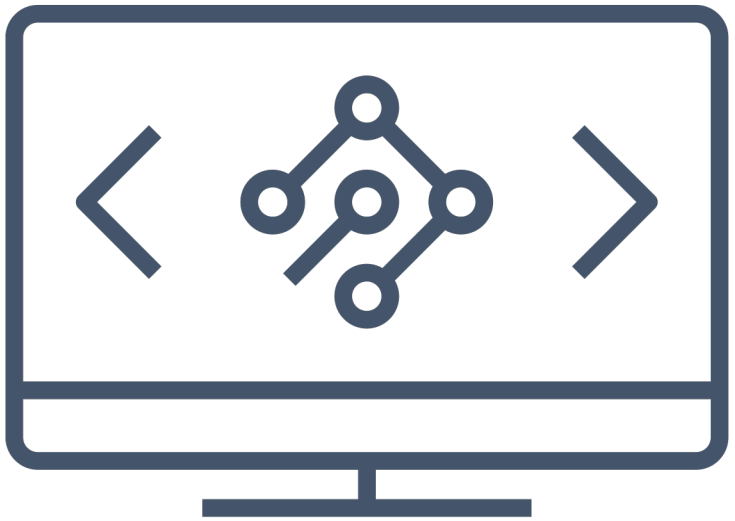
Terms in this list should be considered for replacement. Terms included in this list have one or all of the following:

- Review by the Inclusive Naming Initiative, with particular attention paid to finding consensus among member companies and participants' companies for replacements
- Research conducted by the Inclusive Naming Initiative on the etymology of the word and non-tech cultural connotations, per the Language Evaluation Framework
- A consensus-based replacement term or terms proposed by the Language Workstream and sent for approval and review to the larger Initiative.

No-Change

This word list captures terms the Inclusive Naming Initiative and its partner organizations evaluated but did not recommend any changes for.

Word Lists as API Contracts



Version-locked; users know which version to expect the change.

Dates for change are documented.

Backwards compatibility means no breaking changes due to a word change.

Communicate a roadmap for future word changes.

Driving compliance requires that we know what compliance means

Automated checks in CI/CD

input

APIs, GUI, CLI

Internal Code

output

Log Files, Telemetry Data

Product Documentation

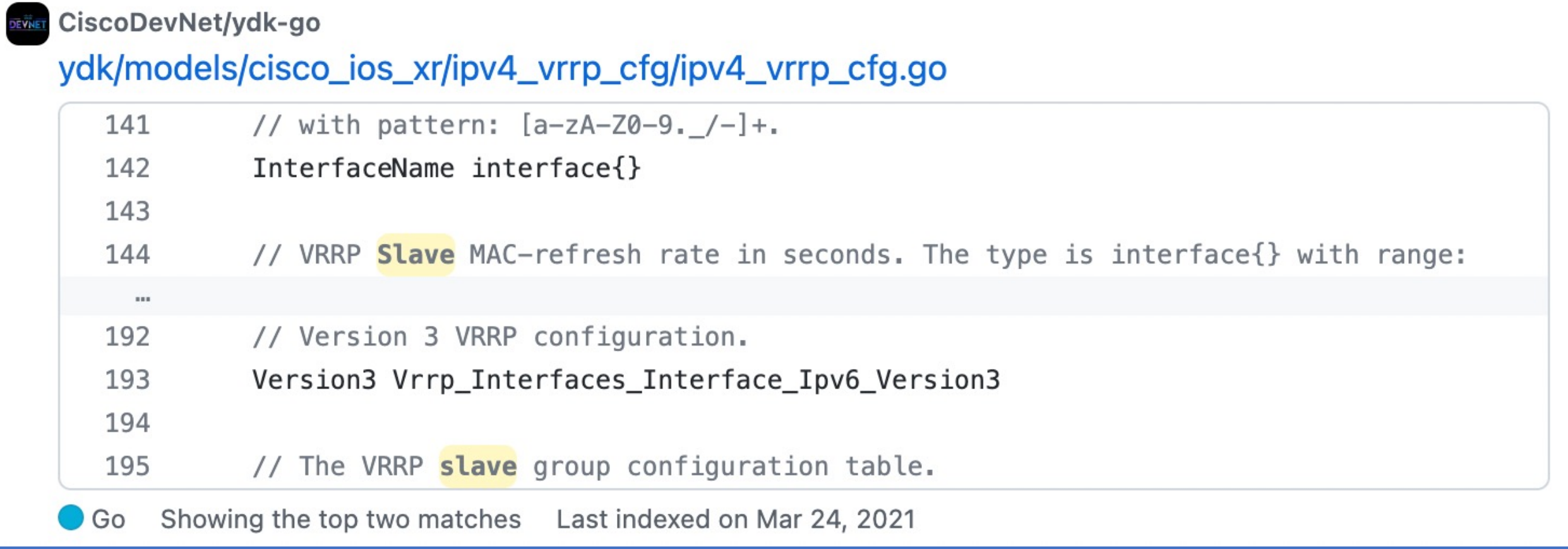
Code and Config Examples

Code and Configuration Examples

Asset Categories

Category #1	Category #2	Category #3	Category #4
Variable names or comments that are internal to code. No impact to customers and no external visibility.	CLI (config, show), API, or schema use. Deprecate the old use and create a new one with a text alias. This is complex and customer-facing; new and old must work.	Logs, telemetry, monitoring: Support old and new (don't break customer scripts). Deprecate the old but cutover to new.	Documentation changes: Simple cases are easy to do. Complex cases (like documenting a CLI) must follow product changes.

https://github.com/CiscoDevNet search for “slave”



CiscoDevNet/ydk-go

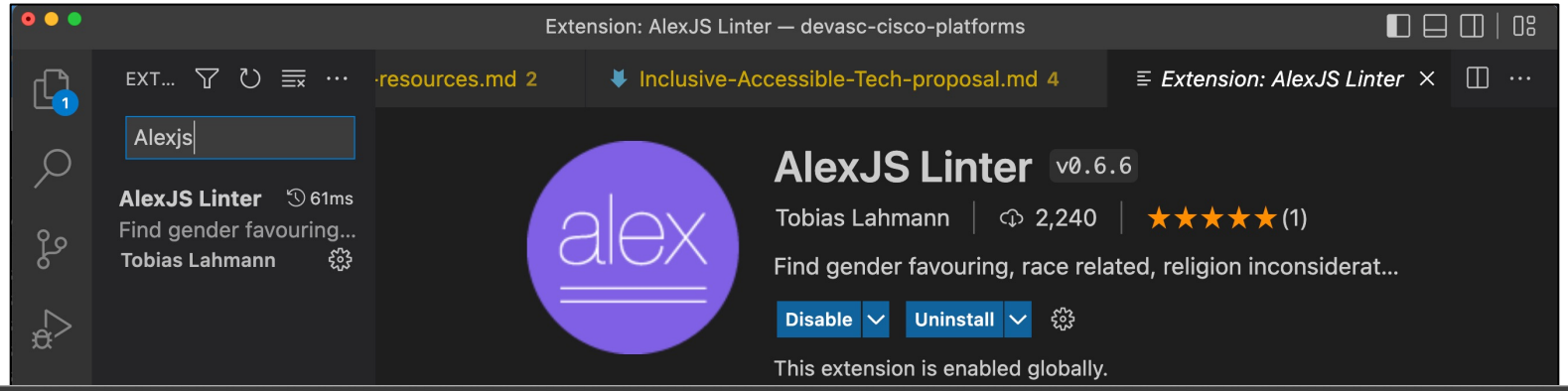
ydk/models/cisco_ios_xr/ipv4_vrrp_cfg/ipv4_vrrp_cfg.go

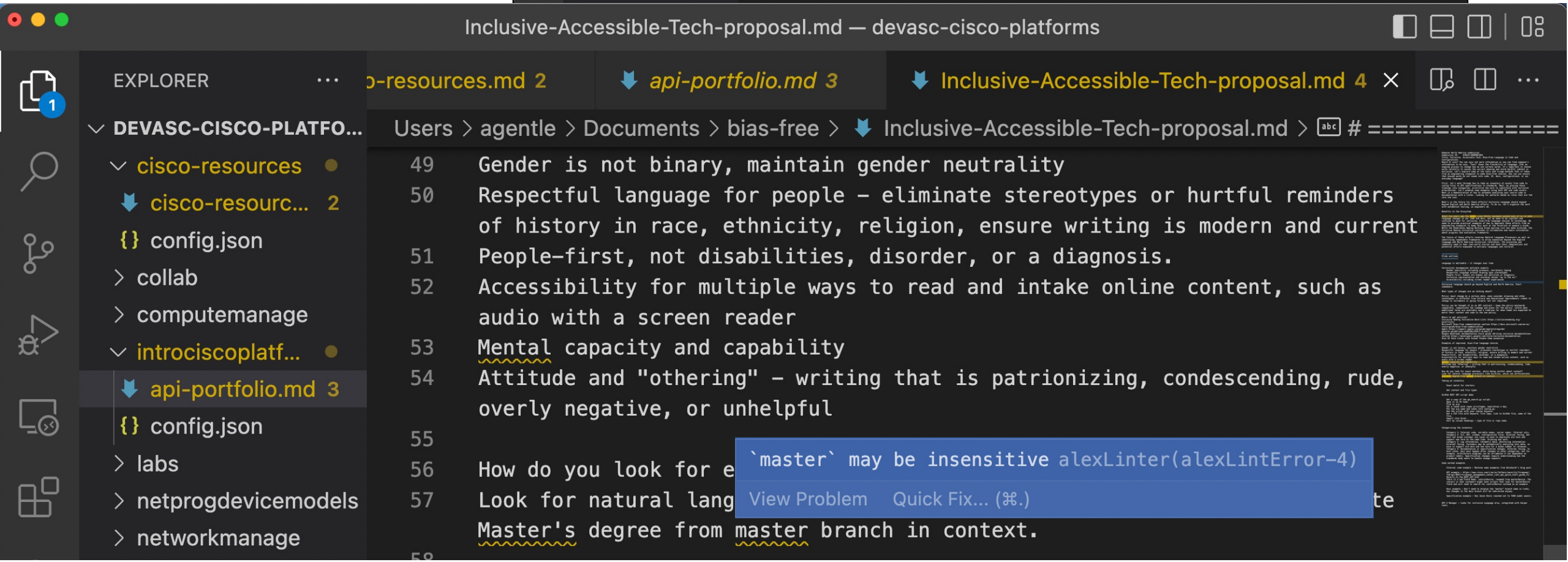
```
141        // with pattern: [a-zA-Z0-9._/-]+.
142        InterfaceName interface{}
143
144        // VRRP Slave MAC-refresh rate in seconds. The type is interface{} with range:
   …
192        // Version 3 VRRP configuration.
193        Version3 Vrrp_Interfaces_Interface_Ipv6_Version3
194
195        // The VRRP slave group configuration table.
```

Go Showing the top two matches Last indexed on Mar 24, 2021

Category 1 example

Visual Studio Code: AlexJS Linter Extension





API Example:

API field name changes

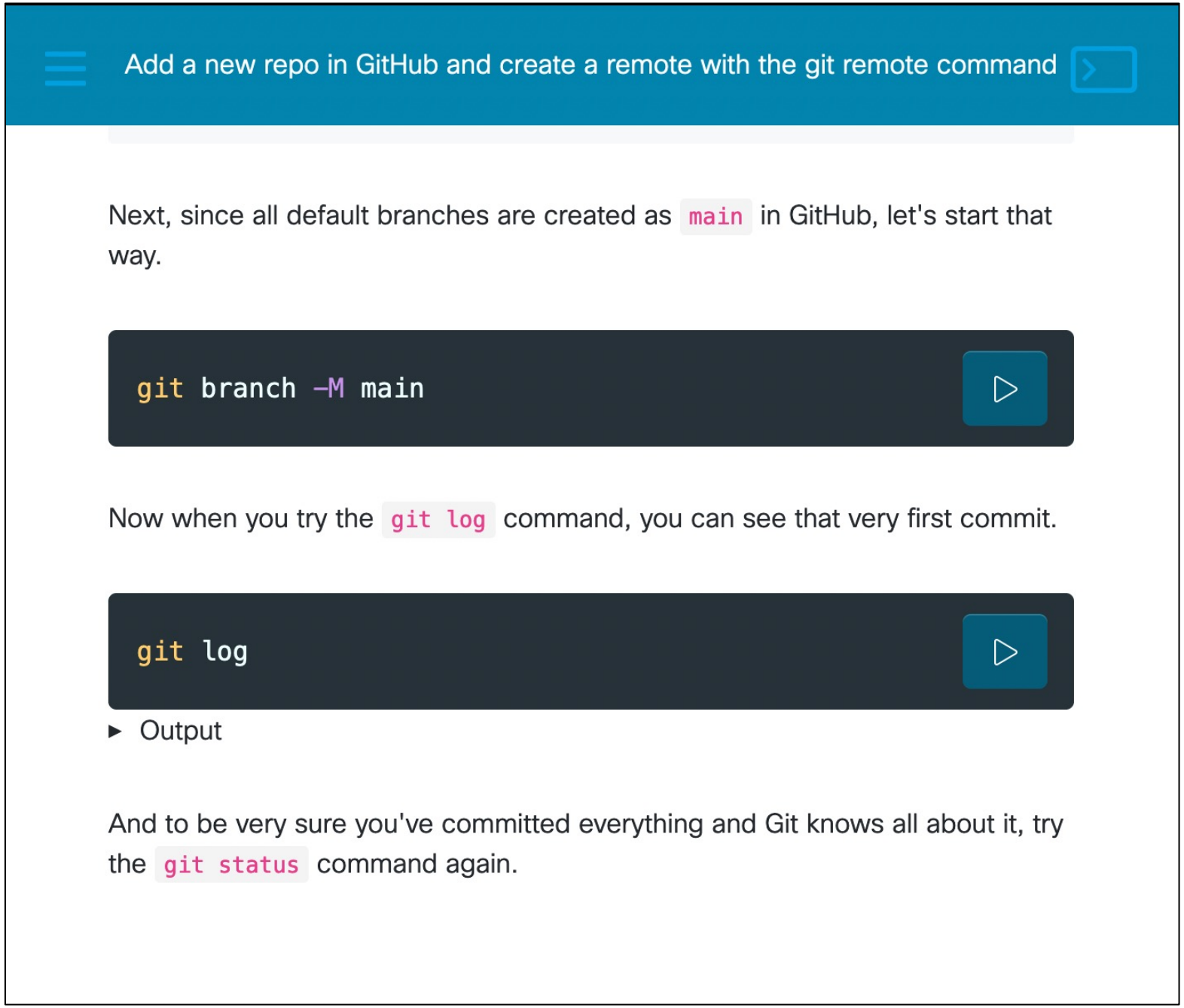
Firepower Management Center REST API v7.1

Field Names (returned JSON)

Previous Field Name	New Field Name
masterDevice	controlDevice
master_device_UUID	control_device_UUID
slaveDevices	dataDevices
slave1_device_UUID	data1_device_UUID
slave2_device_UUID	data2_device_UUID
slave3_device_UUID	data3_device_UUID
whitelist	allowlist
whitelist	allowlist
whitelist	allowlist
whitelist	allowlist

Example:

DevNet Associate Fundamentals Course



Mitigation Example: Ruleset for “woke” linter and Jenkins job

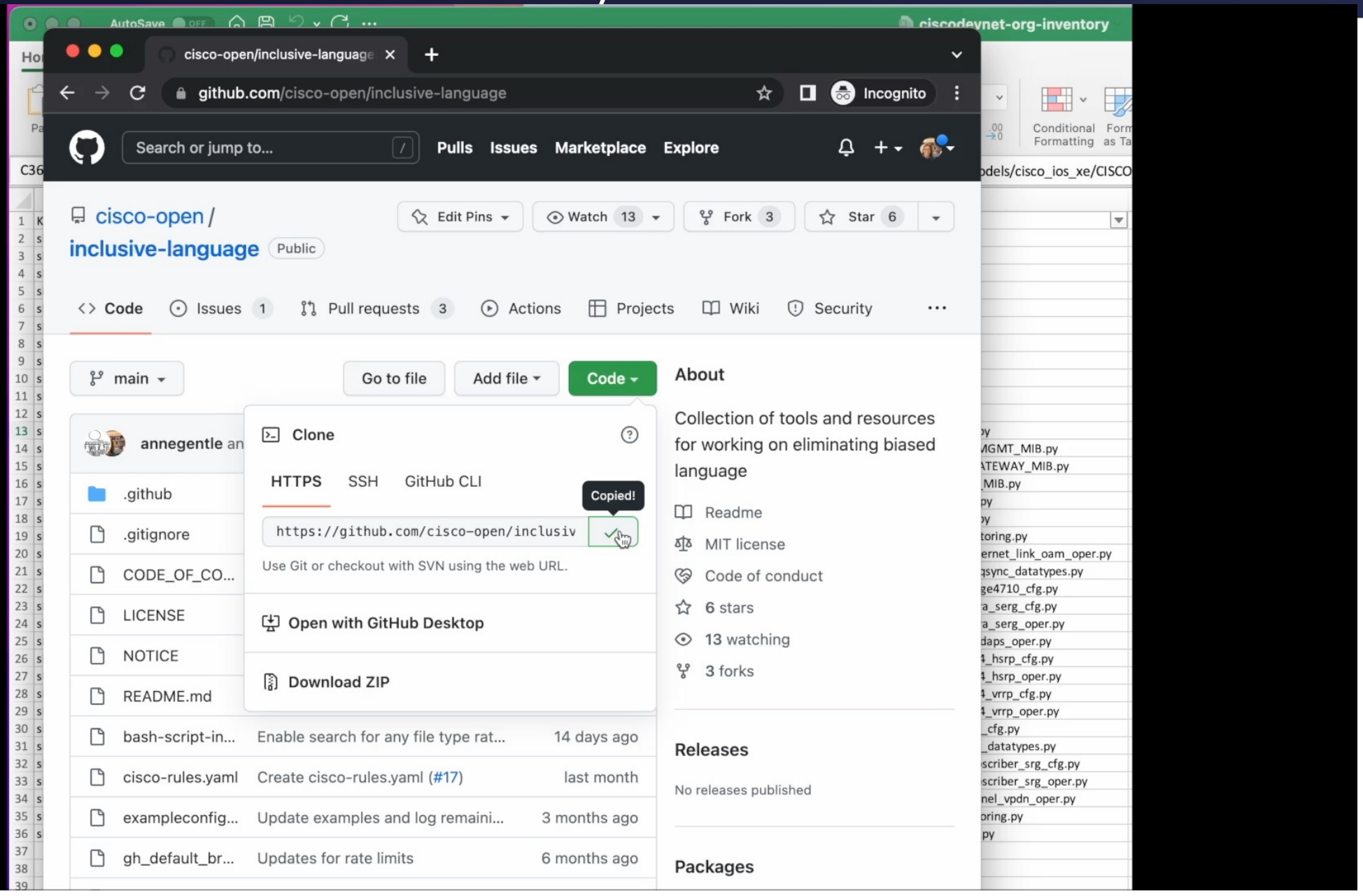
```
/* ***************** ETI SRE Project Jenkins Library ***********
https://wwwin-github.cisco.com/pages/eti/sre-pipeline-library/inclusive/#usage
***************** ********************* ********************* ***********/

// This will be called directly from Jenkinsfile. Expected not to run in microservice/build pipelines
def call (Map params) {
  println ("Running inclusive lint using woke")

  FILES="."
  if ( params.inclusive && params.inclusive.files ) {
    FILES=params.inclusive.files
  }
  println ("parsing files ${FILES}")

  def repo = env.GIT_URL.split('/')[-1].replaceAll('.git', '')
  println ("Git repo ${repo}")
  println ("WOKE_PROJECT ${env.WOKE_PROJECT}")
  sreUtils.writeFromResources('woke/rules.yaml','rules.yaml')
  withEnv(["FILES=${FILES}", "REPO=${repo}"]) {
    sh '''
      set -e
      woke --version
      echo "labels:" >> rules.yaml
      echo "  repo: ${REPO}" >> rules.yaml
      echo "  project: ${WOKE_PROJECT}" >> rules.yaml
      cat rules.yaml
      woke -c rules.yaml ${FILES} --output pushgateway > inclusive.output
      cat inclusive.output
      if [ -s inclusive.output ]
      then
              echo "WARNING you've got non inclusive terms"
              # TO BE ENABLE in 2 weeks
              #exit 1
      else
              echo "You're good with inclusive checks"
      fi
```

How to Take Inventory



https://github.com/cisco-open/inclusive-language


```
b/docs/VirtualizationBondStateAllOf.md, docs/VirtualizationBondStateAllOf.md
slave conf https://raw.githubusercontent.com/CiscoDevNet/cmx-mobile-sdk-server/5424e715d8c69b11b268d47975a5a
9763f8e92ea/cmx-mobile-app-server-dist/src/main/redis/conf/1.conf, cmx-mobile-app-server-dist/src/main/redis
/conf/1.conf
slave yang https://raw.githubusercontent.com/CiscoDevNet/ydk-py/073731fea50694d0bc6cd8ebf10fec308dcc0aa9/cis
co-ios-xr/ydk/models/cisco_ios_xr/_yang/Cisco-IOS-XR-ptp-cfg.yang, cisco-ios-xr/ydk/models/cisco_ios_xr/_yan
g/Cisco-IOS-XR-ptp-cfg.yang
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cisco_ios_xr/_yang/Cisco-IOS-XR-subscriber-srg-oper-sub1.yang
slave yang https://raw.githubusercontent.com/CiscoDevNet/ydk-go/fac11668ff819ea9ae9271849cbd6c2b3f1a6ed1/ydk
/models/cisco_ios_xr/_yang/Cisco-IOS-XR-infra-serg-oper-sub1.yang, ydk/models/cisco_ios_xr/_yang/Cisco-IOS-X
R-infra-serg-oper-sub1.yang
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r/_yang/Cisco-IOS-XR-ipv4-vrrp-cfg.yang
slave hpp https://raw.githubusercontent.com/CiscoDevNet/ydk-cpp/ef7d75970f2ef1154100e0f7b0a2ee823609b481/cis
co-ios-xr/ydk/models/cisco_ios_xr/Cisco_IOS_XR_ipv4_vrrp_cfg.hpp, cisco-ios-xr/ydk/models/cisco_ios_xr/Cisco
_IOS_XR_ipv4_vrrp_cfg.hpp
slave go https://raw.githubusercontent.com/CiscoDevNet/ydk-go/fac11668ff819ea9ae9271849cbd6c2b3f1a6ed1/ydk/m
odels/cisco_ios_xr/subscriber_srg_oper/subscriber_srg_oper.go, ydk/models/cisco_ios_xr/subscriber_srg_oper/s
ubscriber_srg_oper.go
slave yang https://raw.githubusercontent.com/CiscoDevNet/ydk-py/073731fea50694d0bc6cd8ebf10fec308dcc0aa9/cis
co-ios-xr/ydk/models/cisco_ios_xr/_yang/Cisco-IOS-XR-subscriber-srg-cfg.yang, cisco-ios-xr/ydk/models/cisco_
ios_xr/_yang/Cisco-IOS-XR-subscriber-srg-cfg.yang
```

Thanks Python and GitHub! Excel inventory

slave	cpp	https://raw.githubusercontent.com/CiscoDevNet/ydk-cpp/ef7d759	cisco-ios-xr/ydk/models/cisco_ios_xr/Cisco_IOS_XR_ipv4_vrrp_cfg.cpp
slave	hpp	https://raw.githubusercontent.com/CiscoDevNet/ydk-cpp/ef7d759	cisco-ios-xr/ydk/models/cisco_ios_xr/Cisco_IOS_XR_ipv4_vrrp_cfg.hpp
slave	cpp	https://raw.githubusercontent.com/CiscoDevNet/ydk-cpp/ef7d759	cisco-ios-xr/ydk/models/cisco_ios_xr/Cisco_IOS_XR_ipv4_vrrp_oper.cpp
slave	cpp	https://raw.githubusercontent.com/CiscoDevNet/ydk-cpp/ef7d759	cisco-ios-xr/ydk/models/cisco_ios_xr/Cisco_IOS_XR_ptp_cfg.cpp
slave	hpp	https://raw.githubusercontent.com/CiscoDevNet/ydk-cpp/ef7d759	cisco-ios-xr/ydk/models/cisco_ios_xr/Cisco_IOS_XR_ptp_cfg.hpp
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slave	hpp	https://raw.githubusercontent.com/CiscoDevNet/ydk-cpp/ef7d759	cisco-ios-xr/ydk/models/cisco_ios_xr/Cisco_IOS_XR_ptp_datatypes.hpp
slave	cpp	https://raw.githubusercontent.com/CiscoDevNet/ydk-cpp/ef7d759	cisco-ios-xr/ydk/models/cisco_ios_xr/Cisco_IOS_XR_subscriber_srg_cfg.cpp
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slave	yang	https://raw.githubusercontent.com/CiscoDevNet/ydk-go/fac11668	ydk/models/cisco_ios_xe/_yang/tailf-common-monitoring.yang
slave	go	https://raw.githubusercontent.com/CiscoDevNet/ydk-go/fac11668	ydk/models/cisco_ios_xe/cisco_ptp_mib/cisco_ptp_mib.go
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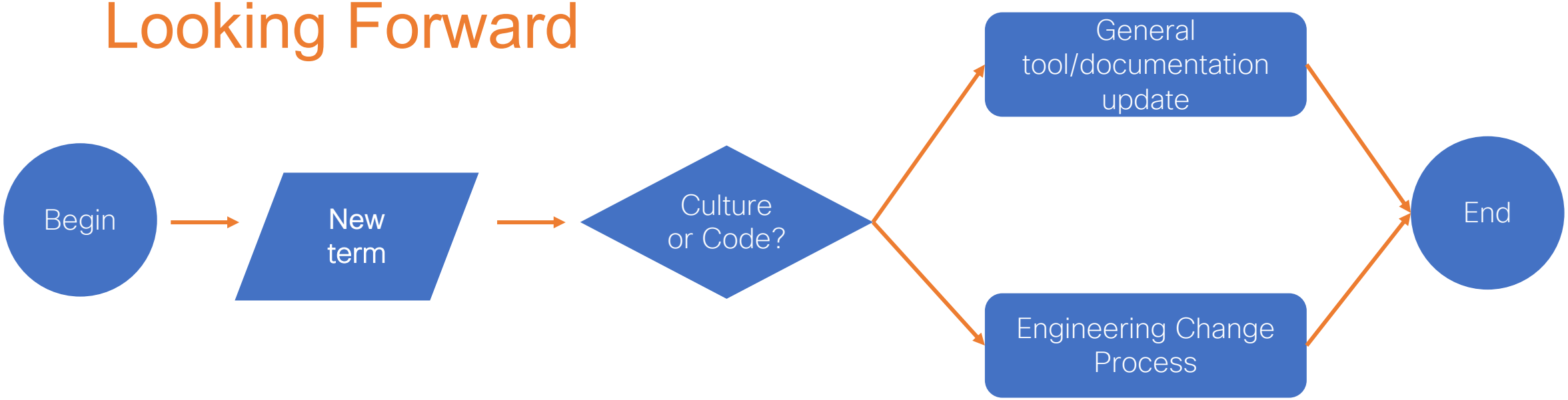
Resources and Questions

New Terms and Impact on Code vs. Culture

Looking Forward



Questions that keep us up at night:

1. Governance structure – Which terms are critical enough to justify a company-wide change in code, and why? And How?
2. US vs. Global intake process – Why wouldn't we include global terms in our policy?
3. Scale - How do we meet all language needs for all roles?

Inclusive Language Resources

Inclusive Naming Initiative
Language recommendation lists
https://inclusivenaming.org/word-lists/

Example Public Policy on Inclusive Naming
https://www.cisco.com/c/en/us/about/social-justice/inclusive-language-policy.html

Inventory Tools and Example Ruleset
https://github.com/cisco-open/inclusive-language

What can you do to advance Inclusive Language?

Take an inventory of your engineering assets (code, log files, telemetry data, standards).

Take a moment to reflect on your own use of language.

Consider what you can do in your role, with your skills, to advance this work. Look for integrations.

Take a Linux Foundation training on inclusive speaking (LFC101) and inclusive open source practices (LFC102).

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Thank you!

Anne Gentle

Developer Experience, Cisco

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https://github.com/cisco-open/inclusive-language

We are hiring!
https://cs.co/api-quality-job

Scan for job link!