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OVAL Proposal Form

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The OVAL Proposal Form is used by members of the community to prepare proposals for migration into an official release of OVAL. The form will be critical in helping the members of the community understand, review, and vet proposals.

Once an OVAL Proposal Form is submitted to the oval-developer-list, the OVAL Moderator will review and verify the proposal for completeness at which point it will be ready for community review and discussion.

When a new proposal is introduced to the community, the OVAL Moderator will work with the OVAL Board to determine the impact of the proposal. If the proposal is deemed a high impact change, it must be developed in the OVAL Sandbox which will require the completion of this form as well as an OVAL Board vote before it is migrated into an official release. More information about the OVAL Board Voting Process can be found at [1]. If the proposal is deemed a low impact change, the proposed change can be made directly to an official OVAL release.

Please direct any questions or concerns to MITRE at [oval@mitre.org](mailto:oval@mitre.org).

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Steps to Take

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1) Review the OVAL Language Sandbox page [2] and the Requesting Changes to the OVAL Language page [3].

2) Complete the form provided below.

3) Email the completed form to the oval-developer-list at [oval-developer-list@lists.mitre.org](mailto:oval-developer-list@lists.mitre.org) with a subject of "FOR REVIEW: <Proposal Name> Proposal Form".

4) Revise the proposal, as needed, based on community discussion and feedback.

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Contact Information

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1) Name: Omar Santos

2) Email Address: os@cisco.com

3) Phone Number (optional):

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Introduction to Proposal

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1) What is the new capability?

The new Cisco IOS tests introduce enhanced capabilities for checking Cisco IOS configurations. These new tests will add to the existing set of Cisco IOS tests currently available.

2) Why is the new capability needed?

The new Cisco schema is needed for checking granular Cisco IOS configurations. The new tests were derived from the gaps discovered during the creation of the DISA Cisco IOS STIG benchmark prototype content.

3) What is the version of the targeted official OVAL release?

The targeted OVAL version for this proposal is OVAL 5.11.

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Benefits of Proposal

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1) How does the proposal relate to existing OVAL use cases [4]?

The new tests provide expanded capabilities to express and assess Cisco IOS configurations for the following OVAL use cases:

* Security Advisory Distribution
* Vulnerability Assessment
* Configuration Management

2) What does this proposal enable that cannot currently be accomplished in the OVAL Language?

The new tests address checking limitations in the following areas:

* Access Control List (ACL)
* Interface enumerations
* Router Protocol expressions
* Configuration section testing
* SNMP testing

3) What alternative approaches for supporting these use cases were considered and why is this one the best?

Existing checking capabilities are limited to basic configuration parsing.  New and additional capabilities are needed to address several current limitations with the IOS schema. The new additions enhance the schema to support ACL access control lists (ACLs), Router routing protocols (ie., OSPF, RIP, BGP, EIGRP), simple network management protocol (SNMP) configuration and specific  sections of the configurations.

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Impacts of Proposal

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1) Which existing OVAL schemas are affected by this proposal?

The Cisco IOS schema is affected by this proposal.

2) Does the proposal break backward compatibility with previous versions? Please see OVAL Versioning Policy [5] for more information.

This proposal does not break backward compatibility.

2) How will the proposed changes impact OVAL content authors?

This will have a positive impact for OVAL content authors to create new content based on the new tests.

3) How will the proposed changes impact OVAL content consumers?

This will have a positive impact for OVAL content consumers to assess Cisco IOS routers and switches.

4) How will the proposed changes impact existing OVAL content?

There should not be any impact to the existing Cisco IOS content. The impact may come in the form of revisions to existing Cisco IOS content if the content authors decide to leverage the proposed test(s).

5) How will the proposed changes impact existing OVAL implementations?

The impact is that existing OVAL tools will need to implement the new capabilities in their tools if the proposal is accepted into the OVAL Language.

6) Are there any concerns regarding this proposal (e.g., undocumented APIs, etc.)? If so, are there any mitigating factors?

During the initial comments period there were some concerns were raised on the OVAL developer email list about:

* Tests created based on the Cisco IOS show command line output.
* Assessment methods. Offline analysis of configuration file or live online integration of the device.

Here is the link to the email discussion on the topic:

<http://making-security-measurable.1364806.n2.nabble.com/FEEDBACK-REQUESTED-Migrate-the-Cisco-IOS-Tests-from-the-Sandbox-to-Official-Release-Deadline-October-tt7581328.html#a7581332>

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Technical Review

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1) Do the schema changes follow the accepted naming and design conventions?

Yes.

2) Do the schema changes satisfy the requirements specified in the Requesting Changes to the OVAL Language page [3]?

Yes.

3) Do the schema changes align with the targeted official release (e.g., changes that break backward compatibility should not target a minor release)? Please see the OVAL Versioning Policy [5] for more information.

Yes.

4) Have the new capabilities been successfully implemented and tested with sample content?

No.

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Resource Information

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1) Provide URLs for relevant OVAL Sandbox Issues:

* Deleted pix-os and cat-os schemata, changed ios schema #54 (<https://github.com/OVALProject/Sandbox/pull/54>)
* Made new changes, added new tests and edited a couple existing ones (IOS) #55 (<https://github.com/OVALProject/Sandbox/pull/55>)
* New SNMP tests for Cisco IOS #56 (<https://github.com/OVALProject/Sandbox/pull/56>)
* Finished our updates for Cisco schemata to make it in OVAL 5.11 #61 (<https://github.com/OVALProject/Sandbox/pull/61>)

2) Provide URLs for OVAL Sandbox schemas that exemplify the proposed changes:

<https://github.com/OVALProject/Sandbox/blob/master/x-ios-acl.xsd>

<https://github.com/OVALProject/Sandbox/blob/master/x-ios-interface511.xsd>

<https://github.com/OVALProject/Sandbox/blob/master/x-ios-routing.xsd>

<https://github.com/OVALProject/Sandbox/blob/master/x-ios-section.xsd>

<https://github.com/OVALProject/Sandbox/blob/master/x-ios-snmp.xsd>

3) Provide URLs for the location of sample OVAL Definitions, OVAL System Characteristics, and OVAL Results that exemplify the proposed changes:

None available at this time.

4) Provide URLs for products or tools that implement the proposed changes:

There are currently no publicly available products that have implemented the new proposal.  It is expected that once the proposals are approved adoption and support will ensue.

5) Provide URLs to any other resources that may be relevant to reviewing and verifying the proposal:

<http://making-security-measurable.1364806.n2.nabble.com/FEEDBACK-REQUESTED-Migrate-the-Cisco-IOS-Tests-from-the-Sandbox-to-Official-Release-Deadline-October-td7581328.html>

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References

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[1] <http://oval.mitre.org/community/board/voting.html>

[2] <http://oval.mitre.org/language/sandbox.html>

[3] <http://oval.mitre.org/language/about/change_requests.html>

[4] <http://oval.mitre.org/adoption/usecasesguide.html>

[5] <http://oval.mitre.org/language/about/versioning.html>