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# The **Updates** on the Gap Analysis, Problem Statement, and Requirements for Inter-domain SAV

*draft-ietf-savnet-inter-domain-problem-statement-15*

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# Overview of the Document

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## □ Objective of the document

- ◆ Provide gap analysis of existing inter-domain source address validation mechanisms, describe the problem space, and define the requirements for technical improvements

## □ Current stage

- ◆ The draft has reached WGLC
- ◆ Feedback has been constructive and mainly targets clarity, scope, and requirement wording (Thank you all for the feedback!)

## □ What we do in v-15 compared to v-14

- ◆ The core direction is unchanged
- ◆ V-15 resolves the main ambiguities raised in discussion

# What the WGLC Feedback Focused on

<b>Requirement language</b>	How strong the requirements should be, especially for <b>the use of “MUST” and “SHOULD”</b> , and what <b>“better than current practice”</b> should mean.
<b>Scope boundaries</b>	1) Whether inter-domain SAV should refer to <b>SAV on AS-to-AS interfaces that carry eBGP sessions.</b> 2) Whether the document should say earlier in the introduction and more explicitly that <b>packet-modifying approaches are out of scope.</b>
<b>Provider-side spoofing</b>	Whether improper permit from provider interfaces is stated clearly enough, and <b>how that scenario should be named and defined.</b>
<b>Terminology alignment</b>	Whether <b>SAV-related information and SAV-specific information</b> are defined correctly.
<b>Editorial clarity</b>	References, abbreviations, <b>DSR scenario figure</b> , and corresponding text that could be misread or not consistent across the whole document, and should be clarified.

**Most comments are converging rather than conflicting: they aim to make the draft more precise, less ambiguous, and easier to use as the basis for the solutions.**

# Summary of Revisions in v-15

Feedback Theme	Revisions in v-15
<b>Normative language</b>	Requirements reframed from absolute improvement claims to a clearer baseline: <b>new mechanisms MUST NOT be worse than existing methods</b> and SHOULD improve filtering behavior.
<b>Scope and motivation</b>	Inter-domain SAV clearly stated to refer to <b>SAV on AS-to-AS interfaces that carry external BGP (eBGP) sessions</b> . The “no packet modification” in the data plane scope boundary is now stated already in the introduction and explained as an intentional scope limitation.
<b>Provider-side spoofing</b>	Provider-interface improper permit is now explicit, and <b>the scenario is described as “Spoofing from Providers”</b> , with clearer explanation of what the provider may originate or relay.
<b>Terminology</b>	<b>SAV-related information</b> now explicitly includes routing information such as RIB/FIB; <b>SAV-specific information</b> may use a new protocol or an extension of an existing one.
<b>Editorial cleanups</b>	Added SAC-004 as informative reference, <b>revised the DSR scenario figure</b> , improved wording in figures and text, <b>normalized abbreviations and naming</b> , and reduced potentially confusing shorthand in the main text.

# Use of "SHOULD" or "MUST"

## Main concern raised in WGLC

- ❑ Several members commented that the original "MUST" language in the introduction (Sec. 1) and requirements (Sec. 6) was too strong.
- ❑ E.g., "Avoid improper blocking" in an absolute sense is unrealistic under partial deployment and diverse routing scenarios.
- ❑ Some members suggested to compare new mechanisms with current practice, rather than require universal improvements in all metric and all scenarios.

## Revision made in v-15

- ❑ Kept a firm baseline
  - ◆ Any new mechanism **MUST NOT be worse than existing inter-domain SAV methods in improper block and improper permit.**
  - ◆ Any new mechanism **MUST have less operational overhead than ACL-based ingress SAV filtering.**
- ❑ Moved improvement claims to SHOULDs:
  - ◆ Any new mechanism SHOULD avoid improper blocking and improve directionality of filtering.
  - ◆ Any new mechanism SHOULD be able to automatically adapt to network dynamics and asymmetric routing scenarios.
- ❑ The requirements remain strong, but they are now better aligned with operational reality.

# Scope Clarification on Packet Modification

## Main concern raised in WGLC

- ❑ One suggestion was that the scope limitation in Section 7 should also appear much earlier in the introduction of the document.
- ❑ Why this was raised
  - ◆ Without stating it up front, readers may assume that packet-modifying approaches are also candidates for the problem statement and requirements.

## Revision made in v-15

- ❑ The introduction now states that new inter-domain SAV mechanisms should avoid packet modification in the data plane.
  - ◆ This is consistent with the description in the charter.
- ❑ The introduction also explicitly says that packet-modifying approaches are outside the scope of this document.

## Why this improves the draft

- ❑ **The revision makes the design space explicit:** this document studies validation and filtering mechanisms without modifying packets on the data plane. That keeps the problem statement aligned with the intended solution space and avoids mixing in additional forwarding, interoperability, and deployment questions.

# Provider-Side Spoofing and Improper Permit

## Main concern raised in WGLC

- ❑ The draft should state more explicitly that reducing improper permit from provider interfaces is a key concern.
- ❑ Earlier wording around “SPT” was not fully clear: the spoofed traffic may come from a provider directly or be relayed from its customer or peer side.
- ❑ Some members also questioned whether “Provider Tree” was the right name.

## Revision made in v-15

- ❑ The draft does have the requirement for reducing improper permit at provider interfaces, as replied on the mailing list.
- ❑ The provider-interface scenario is now framed directly as **“Spoofing from Providers”**.
- ❑ The text says the provider may generate the spoofed traffic itself or **relay it from its customers’ or peers’ customer cones.**

# Refining Definitions of SAV-related and –specific Information

## Main concern raised in WGLC

- ❑ Some comments noted that “SAV-related Information” seemed too RPKI-centric in the earlier wording.
- ❑ Others pointed out that routing information such as RIB/FIB should belong to SAV-related information.
- ❑ For SAV-specific information, the wording should allow not only a new inter-AS protocol but also an extension of an existing one.

## Revision made in v-15

- ❑ SAV-related information now explicitly **includes routing information, e.g., RIB and FIB**, as well as RPKI objects that may be used for SAV.
- ❑ SAV-specific information is described as information dedicated to SAV that may be exchanged using a potentially new protocol or **an extension of an existing one**.
- ❑ This makes the terminology more **implementation-neutral** and better aligned with the discussions in the SAVNET architecture draft.

# Editorial Cleanups That Reduce Misunderstanding

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## □ References and wording

- ◆ Added SAC-004 as informative reference
- ◆ Refined wording such as “selective-export policies” for traffic-engineering-related cases
- ◆ Revised the example figure on the DSR scenario and corresponding text

## □ Naming and abbreviations

- ◆ Normalized terms such as P2P and Route Server (RS).
- ◆ Reduced the use of short abbreviations like HOO, LPP, and HP in the main text where they could hinder readability
- ◆ Clarified RS/RS-client related interface wording.

# What v-15 Achieves

## A clearer problem statement

The document now states the scope, the provider-side spoofing problem, and the intent of the requirements more directly.

## A more stable requirement set

The requirements remain strong, but they are now better aligned with operational reality.

## A better basis for next-step work

The draft is better positioned to support future solution design and evaluation in the WG.

**Overall, the WGLC feedback helped sharpen the document rather than change its direction. Thank you all!**

# Conclusion

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- ❑ The draft has now **addressed the main concerns raised in WGLC:** requirement language, scope boundaries, provider-side spoofing, terminology refinement, and editorial issues.
- ❑ The discussion **has been constructive and convergent:** the WG is helping remove misunderstandings, not exposing a fundamental disagreement on the document' s direction.
- ❑ With these clarifications incorporated, the document **is in a stronger position to continue progressing.**

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**Thank You!**

Questions and comments are welcome.