

Wide BGP Communities (update to ver -05)

draft-raszuk-wide-bgp-communities-05

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IETF 92, March 2015, Dallas, TX

Registered Wide BGP Communities

draft-raszuk-registered-wide-bgp-communities-00

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Agenda

- **Objective**
- **History**
- **Encoding**
- **Companion document**

Registered Wide BGP Communities

Goals

- To define a **new encoding** which will allow operators much more flexible network control while in the same time simplify the amount of required inbound and outbound route policy
- To enable propagation of arbitrary set of **targets and parameters** which will be used during given policy execution
- To provide ability to use **customer's own definition** of parameterized communities as well as set of **IANA maintained** predefined registered wide bgp communities.
- **Not intended to replace** standard or extended BGP communities

History

- Presented originally as single draft at Maastricht IETF 78 2010 as work with Hannes G.

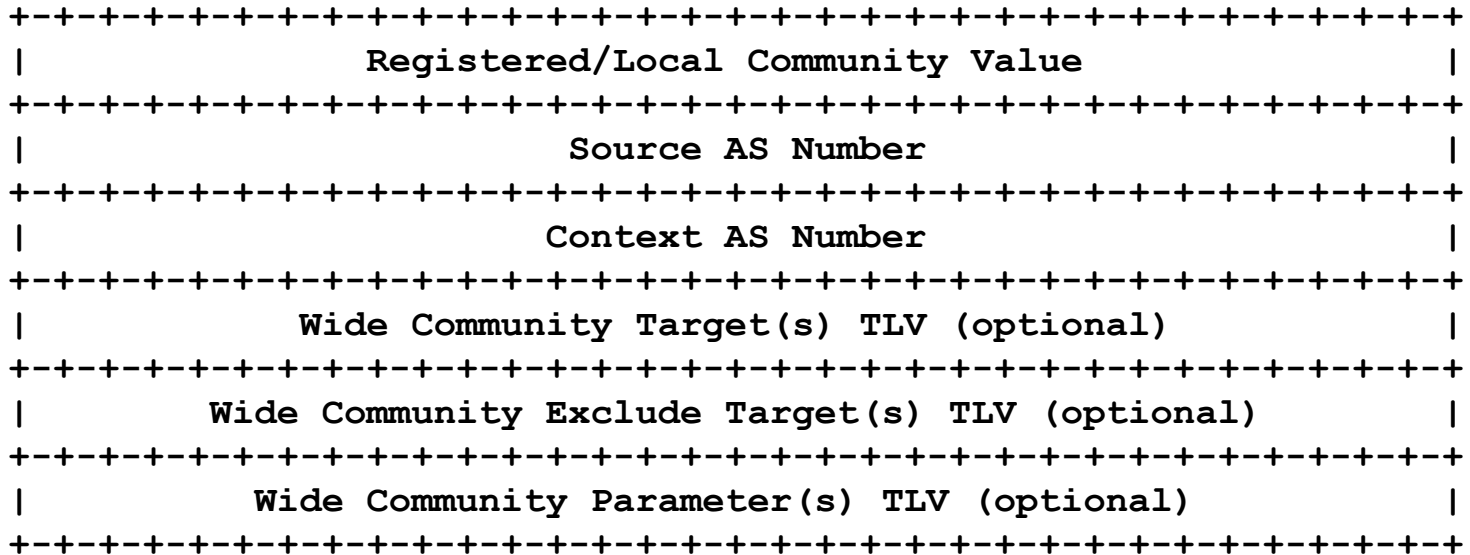
Recommendation of the IDR WG was to split the work into base spec & IANA registered set of wide communities

- Presented in Beijing IETF 79 2010 of splitted work.

Integrated with former related work lead by Andrew Lange (flexible-communities), started a lot of community discussions on encoding (attempt to encode handling algebra) & collect requirements for most useful registered values.

Encoding

- Container type 1:



- Context AS: AS number which defined and published given local community value (for peers, customers or upstreams). For registered communities unless (re)defined MUST be 0.
- Targets and Parameters: TLVs containing atoms (zero or N) which carry values used in executing given community.

Registered Wide BGP Community Values

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Registered Wide BGP Communities

Type	Name	Atom types used
1.	BLACKHOLE	- / - / -
2.	SOURCE FILTER	- / - / -
3.	SOURCE DO RPF	- / - / -
4.	HIGH PRIORITY PREFIX	- / - / -
5.	ATTACK TARGET	- / - / -
6.	NO ADVERTISE TO AS	1 / - / -
7.	ADVERTISE TO AS	1 / - / -
8.	ADVERTISE AND SET NO EXPORT	1 / - / -
9.	FROM PEER	- / - / -
10.	FROM CUSTOMER	- / - / -
11.	INTERNAL	- / - / -
12.	FROM UPSTREAM	- / - / -

Registered Wide BGP Communities

Type	Name	Atom types used
13.	FROM IX	- / - / -
14.	LEARNED FROM AS	1 / - / -
15.	PATH HINT	1 / - / -
16.	NEGATIVE PATH HINT	1 / - / -
17.	PREPEND N TIMES BY AS	1 / - / 4
18.	PREPEND N TIMES TO AS	1 / - / 4
19.	REPLACE BY	1 / - / -
20.	LOCAL PREFERENCE	- / - / 4
21.	AS PATH TTL MAX RADIUS	- / - / 4
22.	GEO-LOCATION	- / - / 8 _(x5)
23.	Free pool	

Conclusion

- Both drafts have been **stable** since Berlin IETF when authors converged on type 1 encoding.
- Other types if proposed to be defined in separate documents
- Authors feel drafts are ready and ask for call on the list regarding **adoption** as IDR WG documents.