Abstract

This document updates RFC 5492 by making a change to the registration procedures for BGP Capability Codes. Specifically, the range formerly designated "Reserved for Private Use" is divided into three new ranges, respectively designated as "First Come First Served", "Experimental" and "Reserved".

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1. Introduction

[RFC5492] designates the range of Capability Codes 128-255 as
"Reserved for Private Use". Subsequent experience has shown this to
be not only useless, but actively confusing to implementors. BGP
Capability Codes do not meet the criteria for "Private Use" described
in [RFC8126] section 4.1. An example of a legitimate "private use"
code point might be a BGP community [RFC1997] value assigned for use
within a given Autonomous System, but no analogous use of
Capabilities exists.

Accordingly, this document revises the registration procedures for
the range 128-255, as follows, using the terminology defined in
[RFC8126]:

- 128-238: First Come First Served
- 239-254: Experimental Use
- 255: Reserved

The procedures for the ranges 1-63 and 64-127 are unchanged,
remaining "IETF Review" and "First Come First Served" respectively.

2. Discussion

The reason for providing an Experimental Use range is to preserve a
range for use during early development. Although there are few
practical differences between Experimental and Private Use, the
change both makes it clear that code points from this space should
not be used long-term or in shipping products, and reduces the
consumption of the scarce Capability Code space expended for this
purpose. Once classified as Experimental, it should be considered
difficult to reclassify the space for some other purpose in the
future.
The reason for reserving the maximum value is that it may be useful in the future if extension of the number space is needed.

The reason for designating "IESG" as the change controller for all registrations is that while it should be easy to obtain a Capability Code, once registered it’s not a trivial matter to safely and interoperably change the use of that code, and thus working group consensus should be sought before changes are made to existing registrations.

Finally, we invite implementors who have used values in the range 128-255 to contribute to this draft, so that the values can be included in the registry. Values that have been reported, are included.

3. IANA Considerations

IANA is requested to revise the "Capability Codes" registry in the "Border Gateway Protocol (BGP) Parameters" group as follows.

Reference: [RFC5492] and this document.

Registry Owner/Change Controller: IESG

Registration procedures:

<table>
<thead>
<tr>
<th>Range</th>
<th>Registration Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-63</td>
<td>IETF Review</td>
</tr>
<tr>
<td>64-238</td>
<td>First Come First Served</td>
</tr>
<tr>
<td>239-254</td>
<td>Experimental</td>
</tr>
</tbody>
</table>

Note: a separate "owner" column is not provided because the owner of all registrations, once made, is "IESG".

IANA is requested to perform the following new allocations within the "Capability Codes" registry:
<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>128</td>
<td>Prestandard Route Refresh (deprecated)</td>
<td>(this document)</td>
</tr>
<tr>
<td>129</td>
<td>Prestandard Outbound Route Filtering (deprecated), prestandard draft-li-idr-flowspec-rpd-04 (deprecated)</td>
<td>(this document)</td>
</tr>
<tr>
<td>130</td>
<td>Prestandard Outbound Route Filtering (deprecated)</td>
<td>(this document)</td>
</tr>
<tr>
<td>255</td>
<td>Reserved</td>
<td>(this document)</td>
</tr>
</tbody>
</table>

4. Security Considerations

This revision to registration procedures does not change the underlying security issues inherent in the existing [RFC5492] and [RFC4271].

5. Acknowledgements

Thanks to Alia Atlas, Bruno Decraene, Martin Djernaes, Jie Dong, Jeff Haas, Sue Hares, Acee Lindem, Thomas Mangin, and Tom Petch for review and comments.

6. References

6.1. Normative References


6.2. Informative References


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