



# Route Aggregation Recommendations

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# Route Aggregation Recommendations

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- Draft document discussing:
  - History of aggregation
  - Causes of deaggregation
  - Impacts on global routing system
  - Available Solutions
  - Recommendations for ISPs



# History:

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- Classful to classless migration
  - Clean-up efforts in 192/8
- CIDR Report
- Registry system and PA address space



## Claimed causes include:

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- Routing System Security
- Reduction of DOS attacks & miscreant activities
- Commercial Reasons
- Leakage of iBGP outside of local AS
- Traffic Engineering for Multihoming
- Legacy Assignments



# Impacts:

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- Router memory
- Router processing power
- Routing System convergence
- Network Performance



# Solutions:

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- CIDR Report
- Filtering
- “CIDR Police”
- BGP Features:
  - NO\_EXPORT Community
  - NOPEER Community
  - AS\_PATHLIMIT attribute
  - Provider Specific Communities



# Recommendations:

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- Announcement of initial allocation as a single entity
- Subsequent allocations aggregated if they are contiguous and bit-wise aligned
- Prudent subdivision of aggregates for Multihoming
- BGP enhancements already discussed
- (Oh, and all this applies to IPv6 too)



## Next Steps:

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- Community Feedback
- Adoption by WG
- Published as a RIPE document