Acknowledgements

- IETF community that made this happen, finally!
- Job Snijders for reminding the operations community and providing the commentary on which these slides are based 😊
Since the first implementation of BGP, there has been no standard for the default behaviour of eBGP in the absence of configured policies.

Each vendor did something different:
- Accept everything, announce everything
- Accept everything, announce nothing
- Accept nothing, announce nothing
- ...?
Configuring EBGP without any filters is potentially disastrous:

Example:
- Customer multihomed to two ISPs
- Has no EBGP filters (using their vendor default)
- Accepts everything from upstream 1
- Sends everything to upstream 2
- Accepts everything from upstream 2
- Sends everything to upstream 1
- \( \Rightarrow \) Becomes inadvertent transit between two upstreams
Problems

- There has been a long history of Internet outages caused by “missing” EBGP filters:
  - By accident
    - Lack of knowledge of vendor defaults
    - Lack of training
  - Because of complexity
    - Configuration language
    - BGP attribute manipulation
  - Because of other vendor defaults
    - To automatically route-refresh or not
Solution

- **Industry standard**
  - In the absence of configured policy, EBGP implementations must implement a deny-all on inbound and outbound announcements
  - This does NOT touch IBGP

- **Full text is described in RFC8212**
  - External BGP (EBGP) Route Propagation Behaviour without Policies
Discussion

- Does your vendor support RFC8212?
  - If not:
    - What are their plans to implement?
    - And which software release?
    - Put it in RFP requirements (and make it mandatory)

- Do you have any EBGP configuration which is missing any inbound or outbound policy?
  - Check across whole AS to check that EBGP configuration has inbound and outbound policy implemented