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Where networks meet

DE-CIX Blackholing Service

12.06.2014

KG Infrastruktursicherheit

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What is Blackholing?

- Blackholing effectively means diverting the flow of data to a different (Blackhole) Next-hop, where the traffic is discarded
- The result is that no traffic is reaching the original destination and hence hosts located within the „blackholed“ prefix are protected
- Thus blackholing is an effective way of mitigating the effects of Distributed Denial of Service (DDoS) attacks, etc.



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Blackholing @DE-CIX



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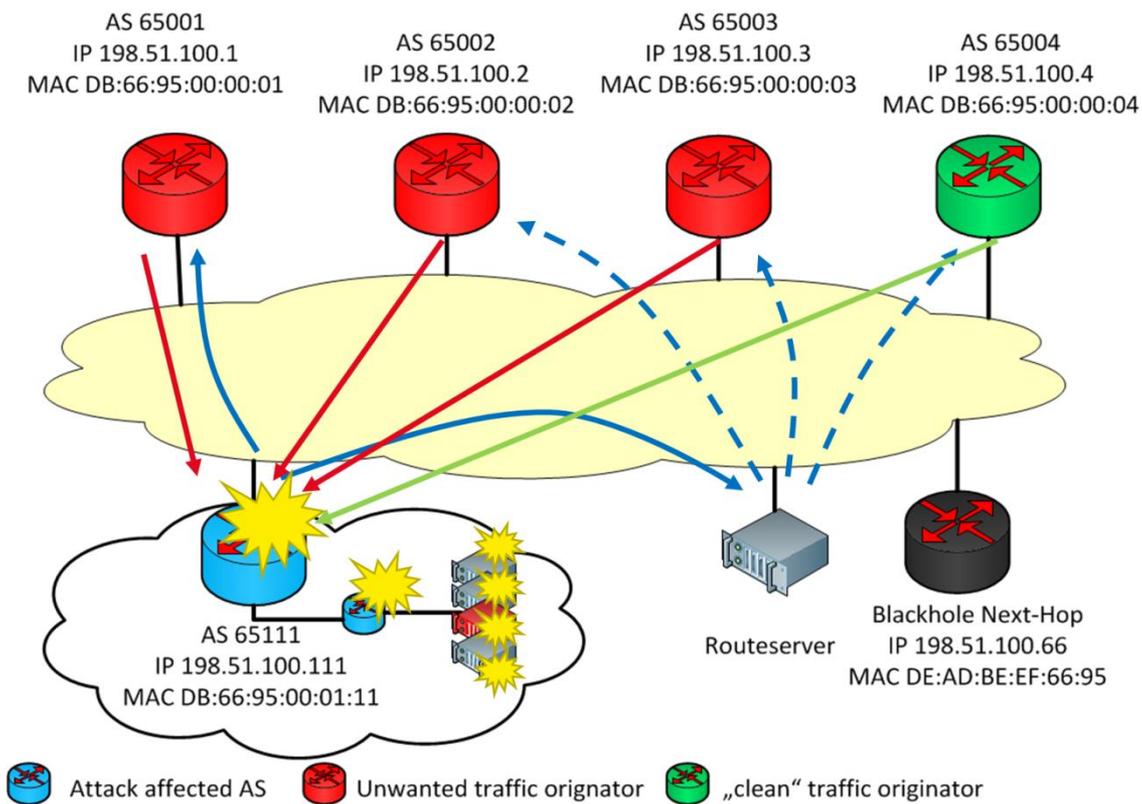


How it works?

- In case of attack
 - Customers advertise their prefixes with a unique DE-CIX-provided Blackhole Next-hop IP address (BN)
 - IPv4: /8 <= up to = /32 (if and only if the BN is set)
 - IPv6: /19 <= up to = /128 (if and only if the BN is set)
- Further, same security checks apply as usual (whether the advertised prefix belongs to customer's ASN, etc.)
- L2 filtering
 - Blackhole Next-hop (BN) has a unique MAC address (determined by ARP for the BN IP address)
 - All traffic with BN's MAC address as destination is denied ingress

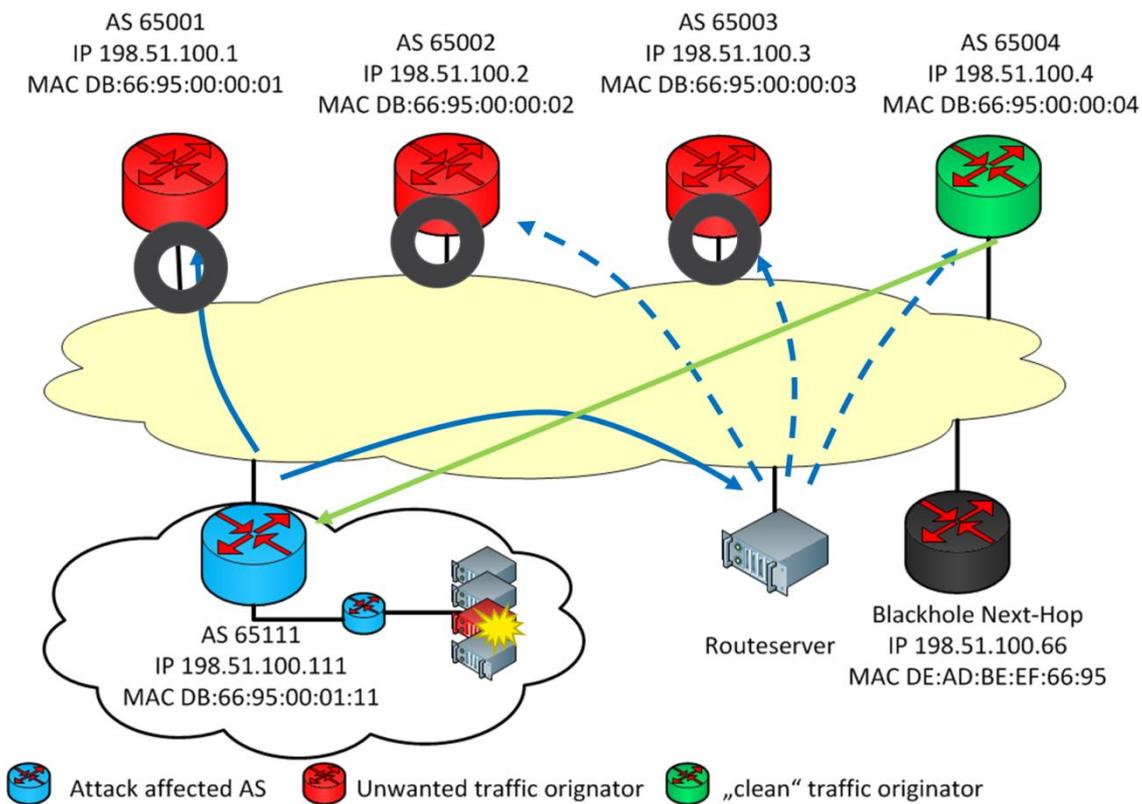


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Statistics

- DE-CIX Blackholing Service is available since September 2012
- Ran over 7 days in March 2014
 - More than 600 routes with Blackhole Next-Hop IP
 - From 28 customers



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Customer Feedback

- Technical challenges
 - Route filtering based on BGP Next-Hop
- Accepting more specific routes (up to /32)
- New ideas
 - IXP-wide standard Blackholing Community (Euro-IX, RFC?)
 - Dedicated route server for blackhole routes only
- We would like to hear from you!
 - discuss@lists.rtbh.me
 - <https://lists.rtbh.me/cgi-bin/mailman/listinfo/discuss>



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Questions/Discussion

<http://go.de-cix.net/blackholing/>



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Thank you

Join DE-CIX now!

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