Protecting Resource Records in APNIC Whois Database

Database SIG APNIC-16, Seoul August 2003 Sanjaya (sanjaya@apnic.net)

Ø APNI

Overview

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Ø APN

Motivation

- Correctness of resource records in APNIC whois database (inetnum, inet6num, autnum) is becoming critical in internet operations
- Unprotected resource records are subject to misuse
- Unmaintained resources have actually been used by parties other than the original custodians



Background

- During whois v3 migration, all unprotected resource objects were temporarily maintained by MAINT-NULL
- Proposal in APNIC-14 to replace MAINT-NULL with parent object mantainer did not receive consensus, but a test project was approved
- A test has been conducted on IPv4 202/8 range and APNIC secretariat is ready to go ahead with the proposal

Example

APNIC

APNIC

Unprotected Object:

210.54.50.0 - 210.54.50.255 SAMPLE-NETWORK SampleNet Holdings Ltd inetnum: netname: descr: country: AU admin-c: XA1-AP tech-c: ZY2-AP alien.sample.net.au rev-srv: rev-srv: terminator.sample.net.au roswell@sample.net.au
MAINT-NULL
roswell@sample.net.au 20030714 notify: mnt-by: changed: status: ASSIGNED NON-PORTABLE source: APNIC

Example

Parent Object:

210.54.0.0 - 210.54.63.255 inetnum: netname: descr: UPSTREAM-SAMPLE-NETWORK
Upstream Sample ISP Brisbane AU XX3-AP descr: country: admin-c: tech-c: ZZ3-AP notify: mnt-by: changed: ipadmin@upstream.net.au

MAINT-AP-UPSTREAM ipadmin@upstream.net.au 20000919 hm-changed@apnic.net 20030122 changed: ALLOCATED NON-PORTABLE APNIC status: source:

Proposal

- Protect all internet resource objects (inetnum, inet6num and aut-num) with proper maintainers. An unprotected object mnt-by attribute (currently has 'MAINT-NULL' value) will be filled with its parent's mnt-by value.
- Deprecate NONE value in maintainer object's auth: attribute

Example

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Unprotected Maintainer:

MAINT-AU-UPSTREAM
Upstream sample ISP
Level 20
40 Waterloo Road
Milton QLD
AU
XX3-AP
ZZ3-AP
jpadmin@upstream.net.au
NONE descr: descr: descr: descr: descr: country: admin-c: tech-c: upd-to:

auth: remarks: mnt-by: referral-by: NONE
One of the Maintainer for Upstream Sample MAINT-AU-UPSTREAM APNIC-HM

ipadmin@upstream.net.au 20010910 APNIC changed: source:

101 unprotected maintainers found in APNIC whois

Other RIR

- RIPE
 - A proposal has been put forward to deprecate auth: NONE
- ARIN
 - ARIN database does not allow unprotected record
- LACNIC
 - LACNIC database does not allow unprotected record

Test Result

- On 15 July 2003, we run a MAINT-NULL replacement script on IPv4 202/8 range
 - Total objects found: 2,889
 - Total objects successfully converted: 2,419
 - Total failed to convert: 470
- · Failure reasons:
 - Parent object is also protected by MAINT-NULL:
 - Object contains other error (e.g. invalid nichandle etc.)

Test Result

Objects found by geography:

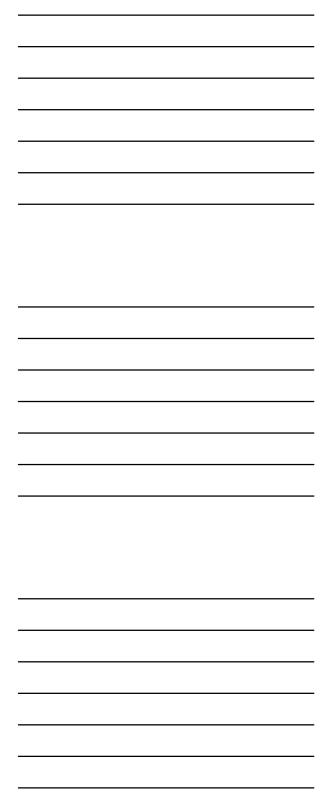
CN 813 NZ 684 318 ΑU TW 313 HK 200 117 TH 112 Others 332

As of the time this report is written, we have not received any complaint about the MAINT-NULL replacement from affected members

Implementation

- 30 days after approval APNIC secretariat will remove MAINT-NULL from:
 - APNIC IPv4 address range delegated from IANA
 - APNIC ASN range delegated from IANA
 - APNIC IPv6 address range delegated from IANA
 ASN range received by APNIC from ERX project

 - IPv4 address range received from AUNIC
- · IPv4 address range received by APNIC from ERX project will always be protected



Implementation • Proposed auth: NONE deprecation schedule: - Send email notifications to the contact persons of maintainer objects currently protected by auth: NONE, requesting them to change the authentication method. - 60 days after notification is sent, if auth: NONE has not been changed, APNIC secretariat will replace it with auth: CRYPT-PW. Implementation • Any error will be corrected within 2 APNIC secretariat business days (must have supporting documents) • APNIC secretariat will present the implementation project report in: - sig-db@apnic.net mailing list - APNIC-17 Database SIG meeting

Questions & Answers